THE UHLE POTTERY COLLECTIONS FROM ANCON

BY

WILLIAM DUNCAN STRONG

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INTRODUCTION

The valley of Ancon has long been one of the points on which South American archaeologists have focused their interest. In this locality there still remains a great deal of material for careful archaeological research; and besides, the considerable body of records about Ancon actually in existence still needs interpretation. The magnificent work of Reiss and Stübel[1] is unique as a pictorial representation of the material culture of the region. Foremost in interpretation is Dr. Max Uhle, who in 1904, under the auspices of Mrs. Phoebe A. Hearst, worked for four months at the site. He published a condensed account of his excavations and discoveries, giving his general theories as to the sequence of cultures and mode of life of the people.[2] But in so brief a paper he was better able to outline conclusions than to present in full the premises on which they were based. In accordance with the policy laid down in a previous paper,[3] it has seemed desirable to offer the Uhle Ancon data in a more complete form, working, as in the previous investigations of the Chincha and Ica collections, from a purely objective basis, and interpreting the results independently in order to verify or correct the work of the excavator himself. In most essentials it was found that the two interpretations agree, although an

[1] W. Reiss and A. Stübel, The Necropolis of Ancon, 3 vols., Berlin, 1880–87.

[2] Max Uhle, Die Muschelhügel von Ancon, Peru, Intern. Cong. of Americanists, XVIII (London, 1912), 22–45, 1913.

[3] A. L. Kroeber and William Duncan Strong, The Uhle Collections from Chincha, present series, XXI, 1–94, 1924.

intensive study of the material and data on hand has led the writer to differ in a few cases from the views expressed by Dr. Uhle. Further work at Ancon should, however, cast light on these problems.

The Ancon collection now in the University of California Museum of Anthropology consists of 809 pieces in all, 264 of which are pots completely preserved or significant collections of sherds taken from one site. Since it is usually from pottery that a satisfactory relative chronology can be established, this paper proposes to deal solely with that part of the collection, leaving the remaining material until a later day. As to the method employed, it is the same as that used in the interpretation of the Chincha and Ica[4] collections. In the case of all the pieces considered, the exact grave provenience is given in Dr. Uhle's original notes now in the possession of the University, and in each case grave lots have been held intact. The grouping has been purely typological and based on careful consideration of all distinguishable characteristics—technique, shape, color, design, and combinations of any or all of these factors.

For the statistical treatment of these classificatory data I am greatly indebted to Professor Raymond Franzen of the Department of Psychology, and to Miss Florence Boyle of the Department of Education at the University of California.

Only after the completion of the typological grouping was the interpretative element of depth and layer of deposit allowed to enter into consideration. And yet the two methods of grouping were found to accord in a way far too striking to be accidental. There appears to be at Ancon a type of stratification somewhat similar to that discovered by Dr. Uhle at Pachacamac,[5] and while there is no case of actual superimposition of all period types within the Necropolis there seems to be a rather clear example of agreement between uniform pottery types and different layers of deposit. Probably a careful analysis of potsherds in graves and heaps of débris would show that such stratification actually exists on the site, but the nature of the work in which Dr. Uhle was engaged made the recovery of complete pots and exhibition pieces an essential part of his task. Be that as it may, later intensive stratigraphic work should yield more detailed evidence to fill in the gaps of his framework of culture sequences, which I feel certain is correct as regards the main development and succession of cultural types.

[4] A. L. Kroeber and William Duncan Strong, The Uhle Pottery Collections from Ica, present series, XXI, 95–133, 1924.

[5] Max Uhle, Pachacamac (Univ. of Pennsylvania, 1903), pp. 19–21.

As to the locality, nature, and history of Ancon and its immediate environs, the reader is referred to the work of Reiss and Stübel, mentioned above, and that of Uhle. The present paper is limited to a study of the pottery actually on hand and the facts to be derived from its nature and provenience.

SITES, GRAVES, AND SPECIMEN NUMBERS

Sites.	*Catalogue Numbers.*	*Periods represented by pottery.*	*Grave provenience.*
A.	5544–5592	Late Ancon II	Graves 1–4
B.	5593–5600	Late Ancon I	Graves 1–4
C.	6265–6279	Late Ancon II	Graves 1–2
D.	6341–6359	Early Ancon	
E.	5792–5801 5847–5858	Late Ancon II	Graves 1–3
H.	5809–5833 5838–5842	Late Ancon II	Grave 2
M.	5601–5645 5843–5845	Middle Ancon II	Graves 3, 4, 14, 15, 102
	5859–5862 5873	Middle Ancon I	Graves 7, 12, 103
P.	5907–6264	Late Ancon II	Grave 101
	6280–6288	Late Ancon I	Grave 1
	6296–6324	Middle Ancon II	Graves 2, 3
	6335 6360	Middle Ancon I	Graves 5, 6, 7, 8, 10, 12, 13, 14, 15, 17, 18, 19, 20, 21, 24, 25, 26, 28.
T.	5646–5791	Late Ancon II	Graves 2, 4, 9, 12, 16
	5834–5837 5876–5886 6325–6330 6289	Middle Ancon II	Graves 1, 3, 5, 6, 7, 10, 11, 13, 14, 15, 101.

CLASSIFICATION OF POTTERY BY PERIODS

Viewed *en masse* the pottery of Ancon from all periods is not very striking. It is a simple ware, rather barren in decoration and not particularly pleasing as to shape. This combination of factors tends to make the segregation of types difficult. When the ware is studied more in detail, pronounced differences do appear, and the uniformity of the grave lots becomes more striking and their grouping easier. There is little of the great variety of color displayed by such early types as the Proto-Nazca in the south, and little of the excellence of drawing and modeling of Proto-Chimu in the north. Unlike the collections from the Chincha and Ica valleys, there is no typical Inca ware in the University collection from Ancon. There are some faint approaches to the Inca type (A4–5588, E2–5799) but these are not strikingly suggestive. Dr. Uhle mentions finding some Inca graves at site Y in the Necropolis,[6] but this material is not listed in his earlier notes. The plates of Reiss and Stübel (pl. 93, figs. 2, 3, pl. 96, figs. 5, 11, pl. 97, fig. 9), however, show many pure and local Inca types, so that it is certain the Inca influence reached the valley in some force. From the lack of historic accounts, it would seem that, at the time of the Spanish conquests, Ancon had already been abandoned.[7]

LATE ANCON II

Since the true Inca type of pottery is lacking in the Ancon collection under consideration, I have called the latest style there found Late Ancon II, in accordance with the local designations used in the previous description of the Uhle Chincha and Ica collections. Dr. Uhle calls this the "Chancay" or "black and white" ware, and it is well known both from Ancon and the neighboring valley of Chancay. This late ware persisted a long time at Ancon, as proved by the deep deposits in which it is characteristic. So many vessels of this variety are shown in the plates of Reiss and Stübel[8] that it has not seemed necessary to illustrate more than the most typical forms in the present paper. The fact that such a large proportion of Late Ancon II ware

[6] Uhle, Intern. Cong. of Americanists, XVIII (1912), p. 39, 1913.

[7] Reiss and Stübel, The Necropolis of Ancon, I, p. "*f.*"

[8] See Appendix, p. 187.

was obtained in their undiscriminating excavation shows rather forcibly how characteristic the type is in the higher graves of the Necropolis, and how widespread the cemeteries of this culture were.

The statistics on the representation of Late Ancon II ware in the University Museum at the present time bring out the following facts. Some 72 per cent of the ware is one and two color, about equally divided between the two. Vessels with a white slip, or ground-color, make up 49 per cent of the total, a proportion only approximated by its immediate predecessor, Late Ancon I, where 44 per cent of the pottery has a white slip. The two preceding styles are strikingly lacking in this regard, Middle Ancon II having only 6 per cent, and Middle Ancon I only 2.5 per cent of white slip. White ware with a black design makes up 30 per cent of the entire representation in Late Ancon II: an enormous increase over any of the other periods. It should be noted that the white is not a polished clear color, with a tinge of yellow or ivory such as the Proto-Nazca in the south shows, but is a chalky or gray-buff shade. This point is brought out in Reiss and Stübel's[9] colored plates. A comparison of these with original vessels of this type in the University Museum seems to indicate that the grayness is slightly overemphasized in the lithographing, but serves admirably to bring out the contrast between the two shades of white. Unslipped pottery is rare, and only a small percentage of three-color ware is present. An example of the three-color ware is shown in a brown vessel with black band and white spots (pl. 42 *a*), but vessels of this type are not common. Not more than three colors are used on any vessel of this type in the University collection. Of the polished black "bucchero" ware, 7 per cent is found. These vessels are undecorated by relief or incised work, and the fact that the percentage is higher in this than any other period, is probably in line with the relatively greater abundance of the bucchero ware in late periods all along the coast. An example of this type is shown in plate 42 *m*, and the typical shape and handle arrangement of the period are also well characterized by the piece.

The most characteristic designs are black lines on a white slip. These designs are usually geometric, there being little attempt at realistic delineation, although in a few cases conventionalized fish and birds are used in a way very similar to that of later periods in the south. More commonly the design consists of variously proportioned diamonds or rectangles formed by thin black lines. Sometimes rather

[9] III, pl. 94, figs. 2 and 7.

thick black bands around the equator of the vessel mark it into definite design areas which may be filled by thin wavy black lines, or heavier bands connect the broad line around the neck and that around the great-circumference or equator of the vessel (pl. 42 *b, n*). Heavy black and white stripes arranged in vertical rows sometimes cover the body of the vessel. Triangles and angles of single or double lines, usually black, often mark off the neck or mouth into segments. This great use of lines, black on white, as opposed to color masses or realistic figures, is very characteristic as a mode of decoration (pl. 42 *j, l*, pl. 43 *b, d*).

Modeling is rather infrequent and of a poor quality. Four animal forms of rather crude make are represented. Three of these are evidently llamas, the best of which is shown in plate 43 *g*. One is a bird figure, hollow with a round hole in the dorsal surface (pl. 43 *f*), and striped with four colors—red, pink, yellow, and white pigment placed in horizontal incisions. The ware is an unpolished black.

Three human figurines clearly indicate the type for the period. They vary considerably in size, but are all of the same white color with black line patterns. The headdress is large and square, with a pattern of geometric black lines across the front. The arms are spread, palm outward in each case, and in the two larger figures (pl. 49 *a, b*) the top of the head is perforated by three holes. In the smallest, only two holes are visible. The genitals are not emphasized in this type, nor are ear plugs definitely shown although they are suggested. The largest figurine is not recorded as from any grave, but is from site T. It is shown here not only on account of its stylistic affinity to the period, but also because it was definitely in the kitchen midden strata. Of it Dr. Uhle says: "6327. Figure of clay . . . . bedded horizontally under strata of the Chancay period at T." Under "Toys," Reiss and Stübel[10] show in figures 1, 3, 4, 7, 10, and 14, the same type of figurine. From the outspread hands, figure 3, also, would seem to be of this type, but the rounded headdress and the impression of the hands on the breast clearly show the influence of the earlier Middle Ancon II style. The transitional nature of this piece is so remarkable that I have reproduced a sketch of it (fig. 1). Figures 4 and 7 are crude, but appear to affiliate with the Late Ancon II style, the former from the position of the arms and perforated headdress, the latter from the general configuration of the body as well as the square headdress. The position of the arms in figure 7, however, although

[10] III, pl. 91.

perhaps due to the pack, strongly suggests the influence of the preceding period. Figure 10 is of the dull black ware mentioned above in regard to the bird figures (pl 43 *f*). The outspread arms and incised line around the waist are usual in this type, but the peaked "dunce-cap" is unique. Considered as a group, these figurines are very similar in their essentials, and when compared to those from other periods are an important aid in classification.

Fig. 1. Figurine, transitional in type between Middle Ancon II and Late Ancon II. From Reiss and Stübel, The Necropolis of Ancon, III, pl. 91, fig. 3.

The shapes assumed by the Late Ancon II ware are not highly variable; like the color and design, they run very much to uniformity. Double handles are commonly used, and as a rule are placed high on the body or neck of the vessel. Handles with the plane of their opening vertical to the plane of the vessel's mouth are twice as numerous as those with handles, the openings of which are planed horizontally (pl. 42 *a, b, c, h, i, j*). The broad or "ribbon" handle is much more frequent in this than in earlier periods, a trait common to most of the later periods on the coast and to the style of the Incas as well. These general characteristics are shown by plates 42 and 43, but the last

characteristic is difficult to observe because only the edges of the handles are visible in the photographs.

Large jugs with constricted necks and short, bulging or "swollen" mouths are frequent in this period. The fact is significant that, of all the vessels in the four periods, 19 per cent of Late Ancon II, and 19 per cent of Late Ancon I, but only 4.3 per cent of both Middle Ancon periods, are vessels of this style. The color is usually white, and the design composed of black lines. A similar condition prevails in regard to jugs with high flaring spouts and round or oval bodies (pl. 42 *a, b, c, j*). These compose 14 per cent of Late Ancon II ware, 19 per cent of Late Ancon I ware, and only 7 per cent of all the vessels from both Middle Ancon periods. These facts not only show the prevalence of these two types in the two latest periods, but also demonstrate rather forcibly the connection between Late Ancon II and its forerunner, Late Ancon I. The handles on the last type of vessel described are usually double, vertical, flat, and placed high up on each side between the body and the neck. Somewhat similar types of vessels are characteristic of the Late Chincha I style, of that valley to the south.[11]

Open bowls with a definite base or rim on the bottom are most typical of the Late Ancon period (pl. 43 *e, h*). They are usually conical, and are white, with heavy black angular or circular patterns of an isolated character. While this type is most characteristic in form, it is slightly less frequent than the common round-bottomed bowl (pl. 43 *a, d*). Vessels shaped like a European tumbler, or flower pot, are quite common, the typical form for this period being much wider at the mouth than the base, with straight slanting sides (pl. 42 *k*). A unique exception to this type is shown by the specimen shaped somewhat like a very large egg cup, with a small definite base and a half-oval, wide-mouthed body (pl. 42 *e*). An exact analogue to this vessel is provided by Reiss and Stübel, III, plate 93, figure 7. The ware is the typical Late Ancon II gray-white in both cases.

A suggestion of the modeled "melon jug" characteristic of the Late Chincha II style is seen in one fairly large vessel of dull polished red ware, which has basal indentations suggesting the configuration of that fruit (pl. 42 *c*). Another interesting type is the typical "stirrup-handled" jug of dull polished brown ware (pl. 42 *f*). The style is rather northern and the technique of manufacture differs somewhat from the usual Ancon style. On the whole, however, alien types are

[11] This volume, plate 12.

not common in Late Ancon II ware, which is definitely homogeneous in its character. The present collection shows little or no influence by the Incas, one pitcher (pl. 42 *a*) being the only possible Inca object on hand. Inca admixture is shown in some of the plates of Reiss and Stübel, but will be dealt with in the conclusion and appendix of the present paper.

LATE ANCON I

The next type, represented by only sixteen pieces, bridges the gap between the late black and white ware, and the bulk of the earlier red, black, and white ware. I have called this type Late Ancon I, because it seemed unique enough to merit special designation as a transition. While it resembles the Late Ancon II in the considerable amount of white or buff coloration, it is most marked as a three-color ware, adding red to the usual black and white of II. There is an even amount of one and two color ware, but the greater part is three color.[12] In shape it is very like Late Ancon II, having open bowls, with definite bases in two cases (pl. 43 *m, p*); round-bottomed bowls; and a few of the smaller "pitcher" types with flaring mouths constricted at the neck and vertical handles connecting body and neck. It differs in that it lacks the large jugs, and especially those of the round or "swollen-mouth" type; and the handles are more often vertical and narrower than those of the later period. A new type, very similar to at least one vessel in the University collection from Chancay,[13] appears, and seems to be peculiar to the period. It suggests the "stirrup-handle" jar somewhat; but the "stirrup-handle" spout is square and massive, and the swollen-mouth and high vertical handles show its connection to the Late Ancon II style (pl. 43 *n*). If it were common in the Late Ancon II, I feel certain it would have appeared in our collection of that type, but it does not. The provenience of the similar Chancay vessel, when that collection is classified, will be highly important in respect to this whole type.[14]

As to decoration the simple geometric style of the Late Ancon II type is present in several cases (one example is shown, pl. 43 *p*), while the red, white, and black striping characteristic of the earlier or Middle Ancon II type is also found in one case (pl. 43 *o*). The typical decoration of the period under discussion, however, which sets it apart

[12] Statistical Treatment of the Data, table I.

[13] No. 4/6581 Museum Catalogue.

[14] The pottery of the Chancay grave where this piece occurs is all of the Late Ancon I type.

from either Late Ancon II or Middle Ancon II, consists of a white slip on which heavy red lines mark off the upper areas of the vessel into sections; these red lines are edged with narrow black lines, which in turn form squares or figures in the centers or corners of the larger white spaces (pl. 43 *j, k, n*). The style is largely geometric but is more elaborate than in the Late Ancon II type, and seems to indicate better control of lines and color by the artisan. Six vessels show this unique style (pl. 43 *i, j, k, l, m, n*), and these, in connection with the foregoing characteristics, seem sufficient to establish it as a distinct type.

The Late Ancon I culture may have lasted a long time or a short time. But on account of the small number of pieces on hand, a comparison of the types of significant traits in this period with the other period types is likely to give a false impression. I have therefore merely indicated the type, showing its strong affiliation with the Late Ancon II style characterized by two colors, and its transitional position in relation to the four and five-color ware of the Middle Ancon II and I styles, respectively. Only when more of the type is on record will it really be possible to find out the true position and importance of this ware.

MIDDLE ANCON II

The type I have distinguished as Middle Ancon II is an interesting though rather impoverished ware wherein one color predominates, usually a dull unpolished red. The greatest number of colors used in this period is four, of which type there is a higher percentage—11 per cent—than in any other style. Its forerunner, Middle Ancon I, has only 1.7 per cent of this type, while the two Late Ancon periods have none. It appears probable that this four-color ware came into use in the Middle Ancon I period, flourished to some extent in the second Middle Ancon period, and died out before the time of Late Ancon I, with its predominant three-color ware. The four colors used are white, black, red, and purple (very dark red). Two and three-color vessels are also found. The only examples of buff or white ware are four vessels (two of which are shown in pl. 44 *g, i*) with very little painted decoration, shaped somewhat like a canteen, and embossed with small raised knobs which are placed on bands curving across the faces of the vessels, with their highest points toward the curve of the neck. This type is not found at all in later periods, and is less frequent in the earlier Middle Ancon I. In one case a modeled face

is represented on the neck, and on the neck of another piece is a crude geometric pattern of thin black lines. True black ware (bucchero) does not occur. Several of the larger vessels are heavily covered with soot from cooking (pl. 45 *n, o*), but they were not originally smoked and later polished.

The shapes are highly variable. The prevailing use of vertical handles is marked. Vessels of the "tumbler" type are found, but these in turn are characteristic of the later periods, and are not found at all in the Middle Ancon I pottery (pl. 44 *o*). Oval-shaped jugs with vertical handles, one or two in number, are characteristic (pl. 44 *b, c, l*). The spout is fairly high and straight and the handle flat or "ribbon" like, similar to handles on our own type of water pitchers, extending from the upper part of the body to the upper portion of the neck. In the earlier period (Middle Ancon I) similar pitchers are found, but here the handles are round, and not flat (pl. 46 *a, h*). A new type of vessel, in which the neck is rounded or "swollen" and the mouth smaller, appears in the Middle Ancon II period for the first time (pls. 44 *k*, 45 *a*). This type, like several others above-mentioned, is found in considerably smaller proportion in the earlier period (pl. 46 *f*). Open bowls are usually round bottomed, the definite base is never found, and they vary considerably in size (pl. 44 *r, e*).

Pottery figurines are four in number, from different graves; three have rounded headdresses and ear plugs (pl. 49 *e, f, g*). The fourth is more like the later type in the position of the arms, but the headdress is too broken to make the identity certain (pl. 49 *d*). The rough unpainted ware and dull brick red color of this specimen somewhat suggests the Middle Ancon II style of pottery; but the object was found above grave T14 and Dr. Uhle in his notes says: "The figure represents a later style (Chancay) and may have been put there for a superstitious purpose by people of a later time who knew of the presence of the old grave." The rounded or crescentic headdress, in conjunction with the breasts, and in one case genitals and ear plugs in relief, all are good period characteristics. The arms of the characteristic three are folded on the breast. The wavy white design on the large red figurine (pl. 49 *e*) connects this type with the Middle Ancon II style of pottery beyond doubt. In Reiss and Stübel, III, plate 91, two figurines of this type are shown (figs. 5, 12). Here, also, as mentioned before, figure 3 (fig. 1, present paper) is of unusual interest in showing the transition in style between this and the Late Ancon II type of figurine. The rounded headdress, color, raised breasts, and

incised place for hand on breast suggest the latter; the outspread arms and hollow palms, the former. It seems quite possible that this type might belong to the Late Ancon I period.

One model of an animal is found (pl. 45 *d*), a dog or llama with a collar around the neck. Three vessels have human faces roughly modeled on the spout, of which two examples are shown (pl. 45 *c, i*); and two modeled handles may crudely represent the human figure (pl. 44 *n, p*). There are two unique vessels of small size having a spout at one end and a modeled animal head at the other. The body in each case is only suggested by the configuration of the vessel.

Unique in the Peruvian collections at the University are three Middle Ancon II pottery ear plugs (pl. 45 *f, j, k*). The largest (pl. 45 *j*) is 8 cm. in diameter at the large end, 4.25 cm. at the small end, and 4.75 cm. in height. The cylindrical part which passed through the ear lobe is not tapered. The central design is a quadruple animal head, with a border of birds surrounded by a double ring. The other two (pl. 45 *f, k*) are identical, 5.5 cm. at one end, 2.5 cm. at the other, and 4 cm. high. The cylindrical part is sharply tapered toward the small end. The design appears to be an extremely conventionalized bird or animal, with a series of alternate spokes around the outer rim. The color of these ear plugs is a reddish buff or yellow, of unpolished pottery. These pottery ear plugs are peculiar to this period at Ancon in so far as the Uhle collection is concerned. Reiss and Stübel show five similar ear plugs.[15] In three of these the central animal appears to be a cat (figs. 8, 9, 10), in one there are four heads arranged like the spokes of a wheel (fig. 7), and one has an obscure central figure. In all cases there is an outer double rim to the ear plug.

Cooking pots without handles but with one or two knobs on each side of their widest circumference are found in eight graves, and are peculiar to this period. The base is slightly flattened, rounding out to a wide body cut off sharply at the equator and sloping inward and up to the neck. At this sharp line on each side is a pointed knob, or sometimes two, one above the other, but always in proximity to the sharp line of greatest circumference (pl. 45 *m, n*). An example of this type (pl. 45 *o*) in grave T 11 has another sharp line above that of the widest circumference, giving the neck a swollen appearance. On this upper line is placed the characteristic knob. One vessel (4–5661) is unique so far as the present collection is concerned. The body is round in outline, but the sides are flat. There are two vertical

[15] III, pl. 70, figs. 6–10.

handles, one on each side of the body, and the decoration is formed by raised curvilinear lines (pl. 45 *i*). An example of this sort of vessel appears in Reiss and Stübel.[16] Of interest with respect to 4–5661 is the modeled face on the neck: this has rounded ear plugs similar to the pottery ones last described. Another type of vessel worth noting is the model of a double-spout jug (pl. 45 *n*) with a ribbon-like connection between the two spouts. This is significant as the latest appearance of the type, which is found most commonly in the Middle Ancon I period.

Middle Ancon II design is of two main types, either the relief work described in the foregoing paragraphs, or a combination of black and white lines on a red background. Of this last type there are two subdivisions; the most common being alternate straight and wavy white lines, very occasionally in the shape of birds or curved designs (pl. 44 *o, d, n, p, r*); and the other subdivision apparently a descendant of the Tiahuanaco style, or, as Dr. Uhle terms it, Northern Epigonal. Here, instead of wavy lines, mass effect is used—black, white, and dark red being laid on the lighter red slip in thick geometric patterns; varicolored angles, triangles, and squares done in a massive way predominate. The surface is usually marked off into geometric areas of different colors and dimensions (pl. 44 *k, n, o, q*). The two types blend in occasional pieces (pl. 44 *j, l, r*), and both are found in the same graves (T 1, for example), so there seems to be no question as to their homogeneity in time. One specimen (pl. 44 *m*) is an interesting forerunner of the later Ancon I type, having a black rim, vertical red and white lines segmenting the outer bowl area, within which segments are black line designs suggesting hieroglyphs. The interpretation of these two main tendencies in design will be discussed later.

MIDDLE ANCON I

This period is interesting for two reasons. First, its pottery is decidedly local in nature, affiliating closely with the types which precede and follow it. Secondly, along with this local nature, external cultural influences are clearly shown. This rather paradoxical condition of affairs will be discussed more fully in the conclusion, but merits mention here in order that the following description may be understood. One-color ware predominates, composing 62 per cent of all color combinations. Of this, 50 per cent is red ware, and 47 per cent

[16] III, pl. 98, fig. 1.

is highly polished. Considering that this is the period numerically best represented, and that there are a wide variety of types in it, we realize how characteristic this one-color (red) polished ware is. About one-half of it is decorated by simple incisions. While in a few graves this red pottery is found alone, it is usually associated with other types, a fact suggesting blending of local and foreign styles and a point which again must be discussed later. That this basic type is, as far as I am able to ascertain, definitely local, gives strong grounds for a belief in the contemporaneity of the graves in which it is found.

About 25 per cent of the pottery of this period is two color, red and black; or three color, black and white on a red slip. Only 3 per cent of the vessels are four color (black, white, pale red, and dark red) and five color (black, white, dark red, purple, and blue or gray). "Bucchero" ware is represented by about 5 per cent, and white or light buff makes up an equal percentage. Both of these latter types are much more characteristic of later times.

The shapes are quite variable. Oval jugs with round necks about two inches in height and without any flare appear to be most characteristic. The absence of handles is strikingly noticeable in this period, only 26 out of the 120 vessels having handles of any sort, and of these 3 are double-spout jars peculiar to this period (pl. 47 *b, d, g*), and 3 others are tubular-handled pitchers also peculiar to this time (pl. 46 *e, h*). In Middle Ancon II, on 84 vessels there are 40 handles and neither of these special types. The oval jugs are without handles (pl. 47 *m, n, o*), and a good many are characterized by having a raised collar with incised angular decorations at the base of the neck. There are several jugs of similar shape with spouts constricted (that is, smaller at the mouth than at the base of the neck), which have pitcher handles (pl. 46 *e, h*). Of these three have the tubular handles mentioned. Large open-mouthed bowls with small handles parallel to the plane of the vessel's mouth are of frequent occurrence (pl. 47 *j, k l*), but there are a few with vertical handles. The former outnumber the latter twelve to three. Parallel handles on the whole occur more frequently than vertical handles in this period, although this characteristic is not so striking as the lack of any handle seems to be.

Open bowls are not very common in this period; when they do occur they are usually flat bottomed, although a few round bottomed specimens of this type are also present (pl. 47 *a*). The definite base occurs neither in this nor the succeeding period. These bowls are

usually one-color red ware, very thick and highly polished (pl. 47 *f*, *l*). Occasionally they are decorated by a simple double-line incision on the exterior (pl. 47 *a*), while a smaller number have simple red and black decoration on the interior (pl. 47 *i*). A thick, high-polished type of pottery is used in all these and is significant in relation to the one complete bowl from the Early Ancon period. This specimen resembles the Middle Ancon specimens in color, shape, thickness, and technique.

Two vessels from grave P 26 seem somewhat out of place here in respect to shape (pl. 47 *c*). These are characterized by a swollen or enlarged mouth about two inches tall, connected with the upper part by two vertical flat handles. The rest of the body is oval, being largest at the base. The decoration suggests the following period to some degree, while the shapes definitely resemble those (pl. 42 *h*, *i*) in Late Ancon II. Evidently this shape in the later styles finds its prototype in this period. That these vessels are forerunners in style and shape to the later types, however, is evident.[17]

Two double-spouted jars connected by a broad horizontal handle are unique at Ancon for this period (pl. 47 *b*, *d*). These, with a tall wide-mouthed jar of polished red partially smoked (pl. 46 *l*), suggest early southern influence, although the former type is quite commonly found even in the later periods farther north, around Trujillo. Two vertical-sided, round-bottomed vessels with walls about 1½ inches high are interesting, and are characteristic of this time at Ancon (pl. 46 *m*). One of these is characteristically decorated with incisions, the other plain and reminiscent of a somewhat later Ica type.[18]. Two small bowls of polished red in P 24 (pl. 47 *a*) suggest the foregoing type, but their sides are rounder.

Three pottery figurines are from Middle Ancon I graves. One is "bucchero" black (pl. 49 *i*), and the other two are red (pl. 49 *m*, *j*). All three are crudely modeled, the eyes of the black specimen being raised and oval in outline. This characteristic applies also to one of the red figurines, which is distinctive in having a sharp projecting

[17] Reiss and Stübel, III, pl. 94, fig. 3, show a vessel of almost identical type in shape, decoration (use of large conventionalized birds), and color. The fact that this piece is polished red with a black design in a similar manner to the two P 26 vessels, seems to indicate that shapes of this sort are not common in red, white, and black polished pottery. The Late Ancon II type of vessels never has these color combinations, so the early origin of this style of vessel seems certain.

[18] Reiss and Stübel, III, pl. 96, figs. 4 and 6, show two pieces almost identical in form. While the Uhle pieces are polished, incised red, the two pieces shown by Reiss and Stübel are red, black, and buff. The decoration is of the "Tiahuanaco" style, and shows the interrelation of local and foreign style so common at Ancon in this period. These vessels are also similar to Middle Ica I pieces—cf. pl. 31, fig. 6, this volume.

Fig. 2. Cat and monster design from Middle Ancon I vessel P 26–6196. Incised area (indicated by stippling), with relief (white).

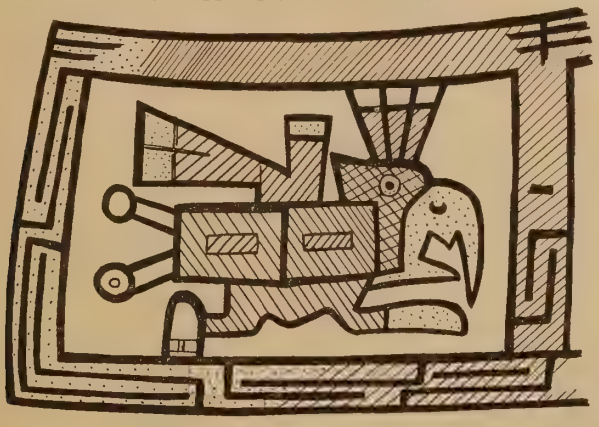

Fig. 3. Bird and monster design from Middle Ancon I vessel P 17–6035. Dark red (white), light red (hatching left to right), gray blue (hatching right to left), white (stippling), purple (cross-hatching), black (black). (Pl. 46 *f*).

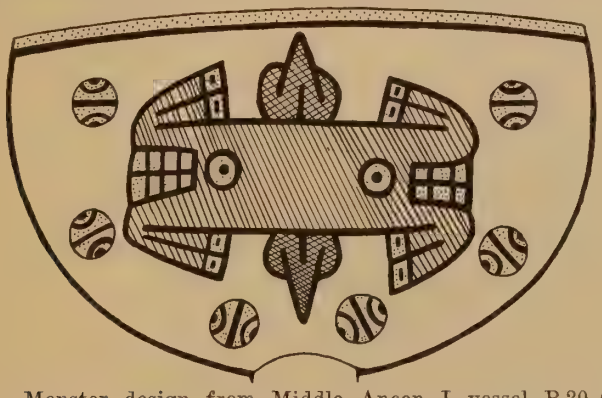

Fig. 4. Monster design from Middle Ancon I vessel P 20–6141. Red (white), white (stippling), black (black), gray (hatching), purple (cross-hatching). (Pl. 46 *c*.)

nose. All have the arms crossed on the breast, the fingers being represented by incisions. The legs in both red specimens are suggested by a depression in the middle of the basal portion. The heads are rounded, with no notable headdresses or ear plugs. Reiss and Stübel (pl. 91, fig. 9) show a gray, apparently well-polished figurine, almost identical. The characteristic differences distinguishing these figurines from those of other periods are clearly shown in plate 49. Several modeled vessels appear, usually of human beings; one pot in the form of a bird is an exception. The decoration of this piece strongly suggests the influence of the Tiahuanaco style (pl. 46 *o*).

Simple incising, on a red highly polished ware, is the most typical form of decoration in Middle Ancon I. This type of decoration is not found in any of the later periods but is highly characteristic of the Early Ancon style. The designs are simple, usually linear and geometric in form. Text figure 6 shows the type clearly, and with the addition of plate 46 *p*, plate 47 *a, b, e; j, l, m, n, o,* should eliminate the need of further description. Vessels of this style are found in nearly every Middle Ancon I grave. Besides these there are the more colorful vessels suggesting the early style of Tiahuanaco (figs. 2, 3, 4) both in shape and decoration. The use of red, black, and blue (or gray) colors, and the snout-nosed monster, conventionalized condor, and "three fingered hand" motifs are all Tiahuanaco. Vessels in this style are found more commonly in some graves than in others but are not isolated in separate graves (pl. 46 *a, c, f, g, n, o*). One piece (pl. 46 *c* and fig. 4) suggests the Proto-Nazca of the south in its mythical monster and circle motifs, as well as the color combination of purple and gray. One true "bucchero" piece, elaborately modeled and incised (pl. 46 *j*), seems to suggest the influence of the Chimu style to the north.

EARLY ANCON

The pottery designated as Early Ancon all came from outside the Necropolis proper, at site D. It consists in the main of potsherds and similar remnants dug up from the artificial deposit of an old settlement, not complete pots from graves as for other periods.

The potsherds vary from polished black to red, and are often unslipped; in one case (4–6347) two colors, polished red and brown, are found. Well-polished black ware is most common, although this often tinges to a dull smooth red or brown. The decoration consists

almost entirely of incised patterns, curvilinear and rectilinear in shape. Figure 7 shows the most typical designs. A comparison of figures 6 and 7 will show the great similarity in motif and type of incision between this, the Early Ancon ware, and that of the succeeding Middle Ancon I. The fact that the bulk of the ware in both periods is incised, while in later periods it is replaced by painting, is significant as to the relative age. There is one complete Early

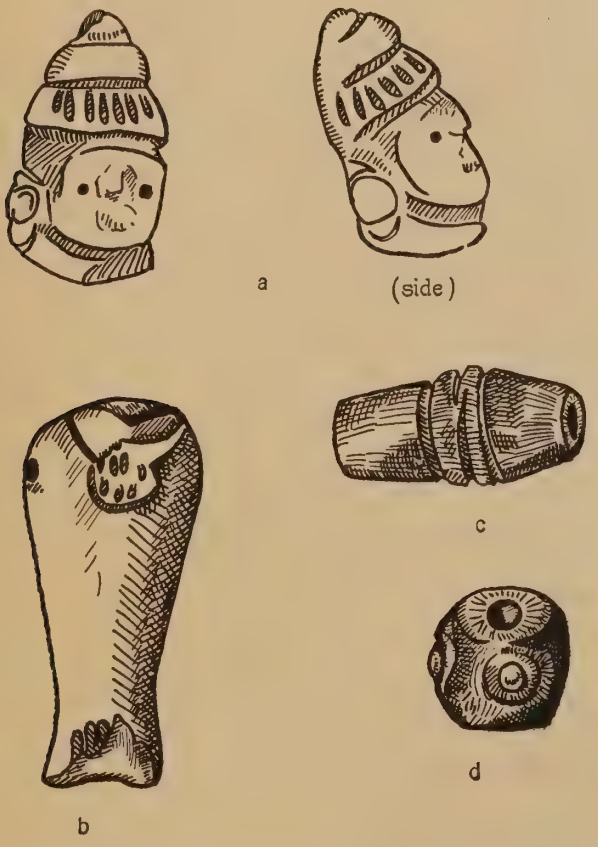

Fig. 5. Figurine head, body, and two spindle whorls: Early Ancon. *a*, D–6341, front and side view of head (pl. 48 *g*); *b*, D–6342, front view of body (pl. 48 *g*); *c*, *d*, D–6343, clay spindle whorls.

Ancon bowl (pl. 48 *f*) of thick polished red ware, about 80 mm. at the base. This bowl closely resembles some of the Middle Ancon I vessels (pl. 47 *f*), but like all the Early Ancon pottery is slightly thicker. The black ware of Early Ancon averages 5 mm. in thickness, and this is about the thickness of the average Middle Ancon I incised ware.

All the sherds are rather small in size, but several flat-bottomed vessels with rounded walls are suggested (pl. 47 *b, h, i*). There are also fragments of heavy round bowls, with no rim whatever at the neck. The walls are thick, and in two out of the four cases there are incisions within the bowl. In one of these cases there are incisions also on the outside (pl. 48 *a*). Four large sherds of heavy flat-bottomed bowls are decorated by vertical incised lines (pl. 47 *h*). Three of these are black, with walls exactly 1 cm. through at the base; one is red, somewhat thinner, 60 mm. at the base. None of the sherds show any indication of a definite lip, and while in three cases color is sparsely used, nearly all the decoration is of incised work, and the illustrations (pl. 48 and fig. 7) clearly show the nature of the designs.

Under number 6342, Dr. Uhle lists "five heads of figures of clay" but of these only two are at hand (pl. 48 *j*). They are both badly weathered and have lost their clean-cut characteristics. One, however, rather strongly suggests certain archaic figures from Mexico more than it does any Peruvian type I am familiar with (pl. 48 *g* and fig. 5 *a*). The other is more worn but of the same type (pl. 48 *g*). With these two heads (4–6341) is apparently the body of one of them (4–6342). It is of the same rough, unpolished, brown clay, much eroded, but still showing its original shape. The toes are indicated by incisions, and it would seem that the hands also are indicated on the breast. While its association with the heads is not absolutely assured, it seems probable, adding an unusually interesting type of very early figurine to the series of Ancon types already described. Two black pottery spindle whorls are also unique in the Ancon collection. They are cylindrical and cubical, respectively, and decorated with incised curves and circles (fig. 5 *c, d*). Another piece of polished black ware, somewhat suggests the back and dorsal fin of a fish, on each side of which are four parallel horizontal incisions filled with white, pink, and yellow pigments. The high polish of the black ware is characteristic of Early Ancon, but the coloring is not typical (pl. 48 *e*). A bird figure, perhaps a whistle, in Later Ancon II, is a rather close analogue (pl. 43 *f*), being of black ware, and having vertical and horizontal incisions filled with similar pink, red, yellow, and white pigments. While the form and pigment-filled grooves of this piece closely resemble the Early Ancon sherd, its crude and unpolished blackware does not.

Two stone implements found with this type of pottery are worthy of notice here. One is a four-pointed stone club-head, with a central hole about 4 cm. in diameter. The axes of the four points are, respectively, 11 cm. by 10 cm. It seems to be an interesting forerunner of the copper or bronze club-heads of similar shape, and if the fact that Dr. Uhle records no metal from this site be significant, and not due to the smallness of the collection, the piece may point out the derivation of that very widely used weapon (pl. 48 *c*). The other stone

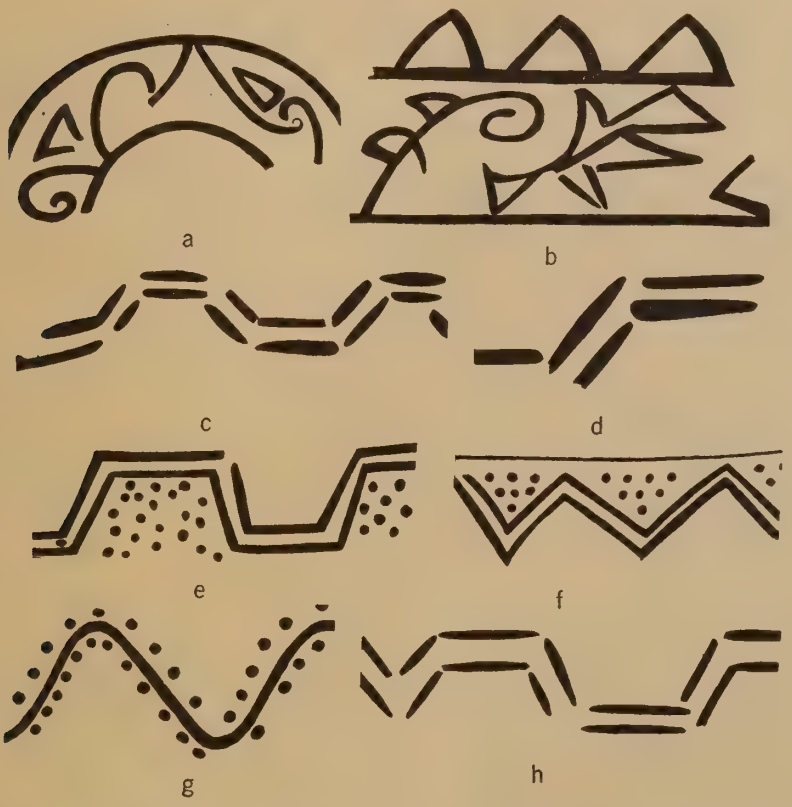

Fig. 6. Incised designs from Middle Ancon I vessels. *a*, P 26–6197, dark red; *b*, P 5–5939, crude unpolished red; *c*, P 24–6167, polished red; *d*, P 24–6168, dark red; *e*, P 8–5971, red; *f*, P 24–6166, polished red.

implement Dr. Uhle calls a mortar. It is of the same gray stone as the club-head, and has a flat, round base, definitely cut walls, and rounded interior. The exterior is definitely shaped, and the walls 3 cm. above the base are about 2 cm. thick.

The only other material objects found in provenience with the Early Ancon ware are a piece of deer antler (pl. 48 *d*), a fragment of an ordinary bone awl, and a net-like basket. Dr. Uhle shows some of this material in his published account.[19] Several of the pieces in his figure 3 are not in the University collections at the present time.

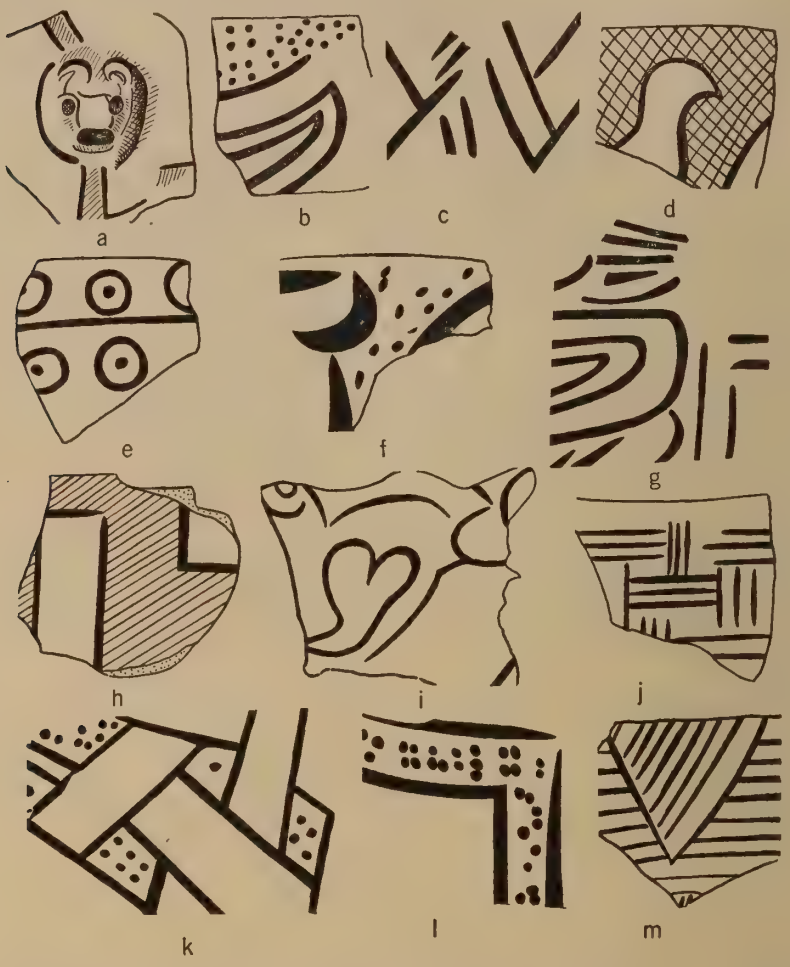

Fig. 7. Incised designs from Early Ancon potsherds (pl. 48 *a*). *a*, D–6345, red and brown, head in relief; *b*, D–6344, dark red; *c*, D–6351, black; *d*, D–6344, black; *e*, D–6347, black; *f*, *g*, D–6344, black; *h*, D–6347, dark red and brown; *i*, D–6344, dark brown; *j*, D–6349, brown; *k*, *l*, D–6346, black; *m*, D–6351, black.

[19] *Op. cit.*, figs. 3, 4, pl. 1, fig. 2.

SUMMARY

The following summary shows in chronological order the salient characteristics of all five periods distinguished at Ancon.

Early Ancon

1. Character of ware. Highly polished. Red ware thick. Black ware thinner.
2. Color. Mostly one color, black to red in shade. (Small amount of two color.)
3. Decoration. Incised rectilinear and curvilinear patterns. (Small amount of painting.)
4. Shapes. Flat bottomed. No definite lip. Round sides.
5. Handles and spouts. None indicated on sherds.
6. Figurines. No arms or legs shown. Body coniform, tapering from shoulders to feet. Head with holes for eyes. Peaked headdresses with vertical grooves. No paint.

Middle Ancon I

1. Character of ware. Highly polished. Red ware very thick.
2. Color. Mostly one color, red, 62 per cent. Two and three color, 25 per cent, four and five color, 3 per cent, representing foreign styles.
3. Decoration. Geometric incisions. Painted polychrome design. Modeled work.
4. Shapes. Flat bottom most frequent. Definite lip. Forms variable.
5. Handles and spouts. Handles not common. Spouts usually smaller at opening than base.
6. Figurines. Solid red or black. No design. Arms on breast. Legs made by groove at bottom. Crude.

Middle Ancon II

1. Character of ware. Rough. Designs crude.
2. Color. One color, red, 44 per cent; two and three color, 30 per cent, and four color, 11 per cent.
3. Decoration. Painting of two types, wavy white designs and square Epigonal designs. Also relief work.
4. Shapes. Round bottom most frequent. Round jugs with handles common. Forms variable.
5. Handles and spouts. Handles common, usually vertical. Spouts usually wider at opening than base.
6. Figurines. Painted designs. Arms usually on breast. Headdress crescentic. Noses aquiline.

Late Ancon I

1. Character of ware. Fairly well made. Designs geometric, but exact.
2. Color. One and two color, black and white, 38 per cent. Three color, black, white, and red, 50 per cent.
3. Decoration. Painting, red and black linear designs on white.
4. Shapes. Flat bottom. Definite base on bowls. Very heavy "stirrup handle" unique.
5. Handles and spouts. Vertical handles high on neck. Spouts wider at opening than base.
6. Figurines. (None associated with pottery of this type in the present collection.)

Late Ancon II

1. Character of ware. Fairly well made. Designs geometric, but often crude.
2. Color. One color, white, 37 per cent. Two color, white and black, 35 per cent, most striking.
3. Decoration. Painting, black linear designs on white slip.
4. Shapes. Round or oval bodies. Round bottoms most frequent. Definite base on bowls.
5. Handles and spouts. Vertical handles high on neck. Spouts often "flaring" at mouth.
6. Figurines. Painted design. Arms spread, palms open. Headdress square and perforated.

In the next section of this paper I present the more detailed table on which the foregoing summary is based. This table 1 (p. 160) shows the main characteristics of all the Ancon pottery in the Uhle collection, and the number of times these occur in each period. The reliability of the differences, and the correlations between the four periods, are brought out by statistical treatment, and strongly verify the relative sequence of the four types of pottery within the Necropolis proper.

STATISTICAL TREATMENT OF THE DATA

In table I, following, is given a division of the collection of Ancon pottery into four periods—Middle Ancon I, Middle Ancon II, Late Ancon I, and Late Ancon II—established on the basis of color, design, shape, and other features already discussed. The Early Ancon period is necessarily omitted from this statistical treatment due to the small amount and fragmentary nature of its pottery. In this table are distributed, under each period, according to the frequency of their occurrence, forty significant traits descriptive of this pottery. The actual number of pieces illustrating each trait is given and the percentage that this number is of the total number of pieces in the period. For example, in the Middle Ancon I period occur three pieces of unslipped pottery, these pieces being 2.5 per cent of the total 120 pieces in this period.

In order to show, if possible, the adequacy of the division and distribution of traits in table I, correlations between the number of pieces of pottery illustrating each trait were found for all periods taken in pairs (table II). Two of these correlations are high, relative to the other four. The two high correlations are that between Middle Ancon I and Middle Ancon II ($r = .612 \pm .067$) and that between Late Ancon I and Late Ancon II ($r = .587 \pm .070$). These correlations show that there is a significant likeness between the relative frequencies of traits in the Middle Ancon I and the Middle Ancon II periods and between the relative frequencies of traits in the Late Ancon I and Late Ancon II periods. The low correlations are those between Middle Ancon I and Late Ancon I ($r = .143 \pm .105$), between Middle Ancon I and Late Ancon II ($r = .291 \pm .098$), between Middle Ancon II and Late Ancon I ($r = .324 \pm .096$), and between Middle Ancon II and Late Ancon II ($r = .271 \pm .099$).

It may be argued that the two high correlations are spurious inasmuch as they might be due to close relationship in frequency of occurrence between a few very common traits and a few very rare traits. The low correlations disprove this, however, since the factor of close relationship between very common and very rare traits, if it existed, would affect all the correlations, tending to make them equal. Nor does the significance of the two high correlations depend on a very close likeness in frequency of occurrence between a few traits, the other traits not having any significant relationship in this respect.

TABLE I

ACTUAL AND PERCENTAGE DISTRIBUTION OF ALL SIGNIFICANT TRAITS—BY PERIODS

	Middle Ancon I n=120		*Middle Ancon II* n=84		*Late Ancon I* n=16		*Late Ancon II* n=43	
	no.	%	no.	%	no.	%	no.	%
1. Unslipped pottery	3	2.5	5	6	1	6	2	5
2. Pottery of one color	74	62	37	44	3	19	16	37
3. Pottery of two colors	14	12	15	18	3	19	15	35
4. Pottery of three colors	16	13	10	12	8	50	4	9
5. Pottery of four colors	2	1.7	9	11	0	0	0	0
6. Pottery of five colors	2	1.7	0	0	0	0	0	0
7. Black ("bucchero") ware	6	5	0	0	1	6	3	7
8. Black ("bucchero") ware, design in relief	2	1.7	0	0	0	0	0	0
9. Black ("bucchero") ware, design incised	2	1.7	0	0	0	0	0	0
10. Plain red ware, unpolished	4	3	13	15.4	2	12.5	3	7
11. Plain red ware, polished	57	47	9	11	2	12.5	4	9
12. Plain red ware, incised design	27	22	0	0	0	0	0	0
13. Plain red ware, design in relief	3	2.5	5	6	0	0	0	0
14. Red ground color, one added color, design in relief	0	0	1	1.4	0	0	0	0
15. Red ground color, black and white design	3	2.5	9	11	3	19	2	5
16. Red ground color, black, white, and dark red design	4	3	14	17	0	0	0	0
17. White (or light buff) ground color	6	5	5	6	7	44	21	49
18. White ground color, design in relief	3	2.5	5	6	0	0	0	0
19. White ground color, black design	0	0	1	1	1	6	13	30
20. White ground color, black and red design	0	0	0	0	6	37	0	0
21. Vessels with plane of handle parallel to rim	12	10	3	4	1	6	7	16
22. Vessels with plane of handle vertical to rim	7	6	31	37	7	44	14	32
23. Vessels with neck swollen, mouth smaller	3	2.5	9	11	0	0	4	9
24. Vessels with mouth swollen	2	1.7	2	2.6	3	19	8	19
25. Vessels without handle, spout constricted at opening	31	26	7	8	0	0	0	0
26. Vessels without handle, raised incised collars	14	12	0	0	0	0	0	0
27. Vessels with two spouts connected	2	1.7	3	4	0	0	0	0
28. Vessels with spout forming loop	0	0	0	6	1	6	1	2
29. Plain bowl, round bottom	3	2.5	4	5	3	19	3	7
30. Plain bowl, flat bottom	20	17	2	2	2	12.5	0	0
31. Plain bowl, definite base	0	0	0	0	2	12.5	2	5
32. Barrel-shaped vessel—no flare at mouth	4	3	3	4	0	0	0	0
33. Tumbler-shaped vessel, straight sides, wide mouth	0	0	3	4	1	6	3	7
34. Vessel with one vertical round handle, pointed spout	3	2.5	0	0	0	0	0	0
35. Vessel with one vertical flat handle, pointed spout	1	.8	6	7	0	0	0	0
36. Vessel with flaring spout (no neck swelling)	4	3	3	4	3	19	6	14
37. Clay figurine, animal form	3	2.5	5	6	0	0	2	5
38. Clay figurine, human form	0	0	1	1	0	0	4	9
39. Use of white design	11	9	32	38	3	19	3	7
40. Use of wavy white line for design	2	2	12	14	0	0	2	5

TABLE II

INTERCORRELATIONS BY PERIODS OF THE FREQUENCY OF OCCURRENCE OF FORTY SIGNIFICANT TRAITS LISTED IN TABLE I*

	M.A. II	L.A. I	L.A. II
M.A. I	.612±.067	.143±.105	.291±.098
M.A. II		.324±.096	.271±.099
L.A. I			.587±.070

* The foregoing correlation coefficients are Pearson r's ± P.E.'s. The variables are the actual number of examples of each significant trait found—not the per cent of occurrence.

TABLE III

RELIABILITIES OF DIFFERENCES BETWEEN PER CENTS OF OCCURRENCE OF FORTY SIGNIFICANT TRAITS IN MIDDLE ANCON I, MIDDLE ANCON II, AND LATE ANCON II

Traits	*Middle Ancon I–Middle Ancon II*				*Middle Ancon II–Late Ancon II*			
	Diff. between % of occurrence	σ Diff.	Diff. / σ Diff.	*Chances that difference is not significant— 1 out of:*	Diff. between % of occurrence	σ Diff.	Diff. / σ Diff.	*Chances that difference is not significant— 1 out of:*
1. Unslipped pottery	3.5	2.957	1.184	8	1	4.214	.237	2½
2. Pottery of one color	18	6.998	2.576	200	7	9.140	.766	4
3. Pottery of two colors	6	5.135	1.168	8	17	8.395	2.925	50
4. Pottery of three colors	1	4.690	.213	2½	3	5.623	.534	3
5. Pottery of four colors	9.3	3.612	2.575	200	11	3.414	3.222	5000
6. Pottery of five colors	1.7	1.189	1.441	13	0*			
7. Black ("bucchero") ware	5	1.989	2.514	160	7	3.891	1.799	30
8. Black ("bucchero") ware, design in relief	1.7	1.180	1.441	13	0*			
9. Black ("bucchero") ware, design incised	1.7	1.180	1.441	13	0*			
10. Plain red ware, unpolished	12.4	4.235	2.928	500	8.4	5.536	1.518	16
11. Plain red ware, polished	36	5.693	6.324	10000+	2	5.296	.378	3
12. Plain red ware, incised design	22	3.782	5.817	10000+	0*			
13. Plain red ware, design in relief	3.5	2.957	1.184	8	6	2.591	2.316	100
14. Red ground color, one added color, design in relief	1.4	1.201	1.166	8	1.4	1.201	1.166	8
15. Red ground color, black and white design	8.5	3.699	2.296	100	6	4.765	1.259	10
16. Red ground color, black, white, and dark red design	14	4.384	3.193	10000	17	4.099	4.147	10000+
17. White (or light buff) ground color	1	3.267	.306	2½	43	8.052	5.340	10000+
18. White ground color, design in relief	3.5	2.957	1.184	8	6	2.591	2.316	100
19. White ground color, black design	1	1.086	.921	6	29	7.072	4.101	10000+
20. White ground color, black and red design	0*				0*			
21. Vessels with plane of handle parallel to rim	6	3.474	1.727	25	12	5.986	2.005	50
22. Vessels with plane of handle vertical to rim	31	5.696	5.442	10000+	5	9.263	.540	3
23. Vessels with neck swollen, mouth smaller	8.5	3.699	2.298	100	2	5.296	.378	3
24. Vessels with mouth swollen	.9	2.100	.429	3	16.4	6.229	2.633	200
25. Vessels without handle, spout constricted at opening	18	4.979	3.615	5000	8	2.960	2.703	200
26. Vessels without handle, raised incised collars	12	2.966	4.047	10000+	0*			
27. Vessels with two spouts connected	2.3	2.442	.942	6	4	2.138	1.871	30

* In the cases above where the difference between per cent of occurrence in two periods is zero due to zero frequencies in each period, the sigma of this difference would be zero, which would mean that the difference divided by sigma difference would be indeterminate. Therefore, all that can be said for such zero differences is that no representation of the trait in question was found in either period under consideration, the chances of its being found among larger samplings of the period being unknown.

TABLE III—(*Concluded*)

Traits	*Middle Ancon I–Middle Ancon II*				*Middle Ancon II–Late Ancon II*			
	Diff. between % of occurrence	σ Diff.	Diff. / σ Diff.	*Chances that difference is not significant—1 out of:*	Diff. between % of occurrence	σ Diff.	Diff. / σ Diff.	*Chances that difference is not significant—1 out of:*
28. Vessels with spout forming loop	0*				2	2.135	.937	6
29. Plain bowl, round bottom	2.5	2.772	.902	6	2	4.560	.439	3
30. Plain bowl, flat bottom	15	3.754	3.996	10000+	2	8.408	.238	2½
31. Plain bowl, definite base	0*				5	3.324	1.504	15
32. Barrel-shaped vessel—no flare at mouth	1	2.645	.378	3	4	2.138	1.871	30
33. Tumbler-shaped vessel, straight sides, wide mouth	4	2.138	1.871	30	3	4.440	.676	4
34. Vessel with one vertical round handle, pointed spout	2.5	1.425	1.754	25	0*			
35. Vessel with one vertical flat handle, pointed spout	6.2	2.900	2.138	60	7	2.784	2.514	160
36. Vessel with flaring spout (no neck swelling)	1	2.645	.378	3	10	5.390	1.855	30
37. Clay figurine, animal form	3.5	2.957	1.184	8	1	4.214	.237	2½
38. Clay figurine, human form	1	1.086	.921	6	8	4.497	1.855	30
39. Use of white design	29	5.905	4.911	10000+	31	6.572	4.717	10000+
40. Use of wavy white line for design	12	3.996	3.003	750	9	5.020	1.793	30

* In the cases above where the difference between per cent of occurrence in two periods is zero due to zero frequencies in each period, the sigma of this difference would be zero, which would mean that the difference divided by sigma difference would be indeterminate. Therefore, all that can be said for such zero differences is that no representation of the trait in question was found in either period under consideration, the chances of its being found among larger samplings of the period being unknown.

The standard scores of each trait for each period were computed, a standard score being the deviation in frequency of occurrence of a trait from the mean of the distribution of frequencies of occurrence, divided by the sigma of the distribution. That is, a standard score shows how many sigmas away and in which direction from the mean, the frequency of each trait is. From an inspection of these standard scores it was found in comparing Middle Ancon I with Middle Ancon II and Late Ancon I with Late Ancon II, that in almost every trait the deviations in terms of sigma were in the same direction from the mean; in at least half of them, the standard scores showed high association.

The two relatively high correlations are therefore truly significant and are a verification and a justification of the division of this collection of pottery into two main periods, Middle and Late Ancon. The two subperiods of Middle Ancon and the two subperiods of Late

Ancon are much more alike in distribution of pottery traits than either subperiod of Middle Ancon is like either subperiod of Late Ancon.

Table III states the reliabilities of the differences between proportional frequency of occurrence in the Middle Ancon I, Middle Ancon II, and Late Ancon II periods of the pottery traits listed in table I. It shows the chances of getting as large or larger differences than these in proportional frequency of occurrence of traits if collections of pottery similar to the present one were made many times. The Late Ancon I period has been omitted from this table because the small number of pieces (only sixteen) is probably not representative of the period, and the large number of zero frequencies may not have been due to the fact that such traits did not exist in the pottery of the period, but to the fact that no pieces illustrating them were collected. Differences depending upon such a limited representation of the period were therefore thought to be unreliable.

Taking the difference in per cent of occurrence for each trait between periods Middle Ancon I and Middle Ancon II, and also between Middle Ancon II and Late Ancon II, the sigma of the difference in each case was computed by the formula:

σ of difference between two proportions $= \sqrt{\sigma^2 + \sigma'^2}$ where $\sigma =$ error of sampling of one proportion and $\sigma' =$ error of sampling of the other proportion. σ and σ' were found by the formula:

$$\sigma \text{ of a proportion} = \sqrt{\frac{pq}{m}}$$

(As the data were treated, there was, of course, no correlation between the proportions whose variability these sigmas represent.) The difference was divided by the sigma of difference to find out how many sigmas away from the mean of the differences each particular difference was located if the true difference were zero. This expression of difference in terms of the sigma of difference was then referred to table 51 in Thorndike's "Mental and Social Measurements," which may be read to state the chances of occurrence in 10,000 for any particular difference divided by sigma of difference. From the values in the Thorndike table were derived in table III the chances of obtaining as large or larger differences than the obtained differences in each trait if many other collections of pottery such as this were made and if the true difference were zero.

The application of this method shows that, while the great number of differences are very reliable, there are eleven cases where the sigma of the difference is twice the difference or more, thereby showing that between the two periods in question the differences are relatively less reliable, and therefore not so significant in regard to the frequency of the trait in either period. The first case of this sort occurs in trait 1 (table III) between periods Middle Ancon II and Late Ancon II, where the occurrence of 6 per cent of "unslipped pottery" in Middle Ancon II and 5 per cent in Late Ancon II (table I) is probably accidental, therefore not significant. Unslipped pottery apparently is uncommon in all periods and markedly characteristic of none.

The next case of this sort occurs in regard to trait 4 (table III) which is "pottery of three colors," proving the differences between the percentages occurring in Middle Ancon I, Middle Ancon II, and Late Ancon II to be all accidental, therefore indicating that three-color ware may be equally common in all three periods. (It should be noted here that the Late Ancon I period, not considered in table III on account of its small representation, marks so far as the present collection goes, the greatest vogue of this type—table I.) The next is trait 11 between Middle Ancon II and Late Ancon II which indicates that the difference between these two periods in regard to "polished red ware" is accidental, the type having been most in vogue in Middle Ancon I (table I) and only sparingly represented in later periods. Another example is trait 22, showing that the difference between the percentage of vertical handles in Middle Ancon II and Late Ancon II is not significant, although their great preponderance over the number of occurrences in Middle Ancon I is marked (table I—trait 22). The other cases of the same sort occur in regard to traits 17, 24, 32, and 36 between Middle Ancon I and Middle Ancon II and in regard to traits 23, 29, 30, and 37 between Middle Ancon II and Late Ancon II. A similar examination of these cases shows either that a small percentage of the trait occurs in both periods and then drops out, or that it reaches its greatest vogue in an earlier or later period and is scantily represented in the two periods under comparison.

Since the greater number of differences in table III are very reliable, it is safe to predict, from the present representation, the tendencies of each period and its relation to the other periods. A consideration of the percentages of the first six traits occurring in each period will show exactly what the tables graphically represent. Trait 1, "unslipped pottery," occurs in only a small percentage in

each period (table I), and while the somewhat smaller amount in Middle Ancon I in comparison with Middle Ancon II is a reliable index of the relative amounts in each period, the difference in amount between Middle Ancon II and Late Ancon II is not (table III—trait 1). In trait 2 the percentages show that "one color ware" is very common in Middle Ancon I, much less so in Middle Ancon II, and slightly less than either in Late Ancon II (table III—trait 2). In this case table III shows all differences to be reliable. Trait 3, "pottery of two colors," occurs in a small percentage in Middle Ancon I, in a slightly larger in Middle Ancon II, and reaches its greatest vogue in Late Ancon II. Table III likewise shows these differences to be reliable. Consideration of trait 4, "pottery of three colors," seems to show, however, that it is about equal in amount in Middle Ancon I and II, that it probably reaches its greatest vogue in Late Ancon I (table I), and returns to its earlier frequency in Late Ancon II; yet table III shows that the slight differences between Middle Ancon I, II, and Late Ancon II are not reliable. Trait 5, "pottery of four colors," is found in a small percentage in Middle Ancon I, increases in Middle Ancon II to its greatest vogue (11 per cent) and then disappears (table I). These differences are very reliable. Trait 6, "pottery of five colors," occurs in a very small percentage in Middle Ancon I and is found in no subsequent period (table I).

A similar examination of each of the forty traits represented will in general show the same results. The trait comes into slight use in one period, gradually increases to the height of its vogue, and then either fades out or disappears entirely. It has seemed important to demonstrate statistically the reliability of all the differences, in order to avoid stressing subjectively chosen traits.

AGREEMENT OF POTTERY TYPES WITH SITES AND DEPTHS

In all, the pottery in the University collection from Ancon came from nine sites; in alphabetical order these are A, B, C, D, E, H, M, P, and T. Of these H, M, P, and T are shown on the map of the site which Dr. Uhle furnished to the University, and which also appears in figure 2 of his published account of the excavations.[20] Site D can be exactly located where he indicates the "Oldest Shellmound" and "Excavations," south of the Necropolis. From data in his original notes, sites A, B, and C can be approximately placed, but site E is without definite location data. The map printed in this paper is the original one furnished the University by Dr. Uhle, with the approximate sites A, B, and C added, as well as the designation D. These letters I have enclosed in circles to distinguish them from the excavator's exact locations.

Pottery from site Z, mixed with pottery from the old graves from plateau P, is illustrated by Dr. Uhle in his published plate 4.[20] I cannot positively identify any of the vessels there illustrated with vessels in the University collection at the present time. The pottery seems about equally divided in type between Middle Ancon I, II, and Late Ancon I, but the fact that the vessels from P graves are mixed with those from Z makes exact classification of the Z material impossible. No pottery from site Z is on record in the University collection, nor is it mentioned in the excavator's original notes on file. In the conclusion I shall have more to say as to its probable importance, for from Dr. Uhle's published account (pp. 34–39) it would seem to mark the transition from the Middle Ancon II style to the Late Ancon I type so sparingly represented in the University collection at the present time.

Another large discrepancy between Dr. Uhle's published account and his original notes occurs in the case of site H. In his printed account (p. 36) he refers to a series of graves at H of which his original notebooks make no mention. His figure 6 (p. 37) shows five graves, H 1, 4, 5, 6, and 9. The pottery from these graves was also "black, white and red," or of the type I have designated as Late

[20] Max Uhle, "Die Muschelhügel von Ancon," Intern. Cong. of Americanists, XVIII (London, 1912), 22–45, 1913.

Ancon I. Grave H 2, recorded in his original notebooks, contained Late Ancon II pottery. I shall also have more to say in conclusion in regard to the importance of these graves.

Since it is a basic principle to work with the original data and material, and not with the excavator's interpretation of them, I have done so throughout this paper. It is necessary, however, to show how well the type of pottery and the stratigraphy of these missing sites, as described by Dr. Uhle in his published account, bear out the results reached solely by a classification of the material actually on hand.

The originals of the diagrams of excavations which Dr. Uhle uses in his published account are not in the possession of the University, hence in the following discussion I have supplemented the data in Dr. Uhle's original catalogues with these diagrams wherever possible. Such of these diagrams as I have reproduced are somewhat simplified copies of Dr. Uhle's illustrations on a larger scale, with English instead of German captions. For the originals of these, and for others it has not seemed necessary to reproduce, the reader is referred to Dr. Uhle's published paper.

In this work and in his original notes, Dr. Uhle distinguishes four main types of burial within the Necropolis proper, and one type outside of this area. The first four are:

a. Those in artificial superimposed strata.

b. Those in natural soil, not further covered by human agency.

c. Those partly in artificial, partly in natural soil, with artificial superimposed strata.

d. Those in natural soil beneath artificial strata.

Classified objectively, the pottery from the sites within the Necropolis also falls into four classes, as already described: Late Ancon II, Late Ancon I, Middle Ancon II, and Middle Ancon I. When the type of the graves of these four periods is determined by reference to Dr. Uhle's original notes and diagrams, it appears that in nearly every case the graves containing Late Ancon II pottery are of the (*a*) type of burial; those containing Late Ancon I pottery are of the (*b*) type of burial (with one important exception, i.e., grave P 1); graves containing Middle Ancon II pottery are of the (*c*) burial type, and those with Middle Ancon I style pottery are of the (*d*) type of deep burial. I have in the following paragraphs presented the evidence for such correlation in the briefest possible form. Beginning with the latest style of pottery, Late Ancon II, I have grouped under that heading all graves characterized by such ware, with the evidence

for their stratigraphy following. This evidence is taken directly either from Dr. Uhle's original notes, in which case quotation marks are used, or else from his published diagrams of the excavations.

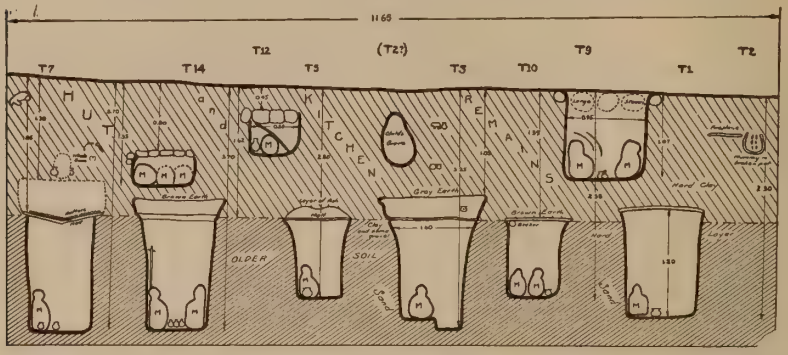

Fig. 8. Diagram of excavations at site T, showing Late Ancon II graves above and Middle Ancon II graves below. From Uhle, Die Muschelhügel von Ancon, Peru. Intern. Cong. Americanists, XVIII, 1912, p. 37, fig. 7.

ASSOCIATION OF TYPES OF POTTERY AND POSITIONS OF GRAVES

Late Ancon II pottery, from (a) graves, "in artificial superimposed strata"

T 2 Diagram of site T, figure 8, shows it to be in artificial layers. For the probable change in its exact horizontal position at site T, see p. 181.

T 4 "Some graves found in the higher parts of the soil within kjoekkenmoeddings, under fragments of very large pots, or within stone cells." Figure 9 also shows position.

T 9 Diagram of site T, figure 8, shows it to be in artificial layers.

T 12 Diagram of site T, figure 8, shows it to be in artificial layers.

T 16 Statement in regard to T 4 applies to T 16 as it follows T 4, T 9, and T 12 in order.

H 2 "Grave H 2 contained four mummies and a skull, only six feet deep. The grave had belonged to a family which by continued interments disarranged the objects contained in the grave."

P 101 "There was a small grave higher in the strata of refuse, above P 1."

C 1 "'There were some graves near kilometer one of the railroad from Ancon to Lima, near the southeastern end of the old settlement. Those which were opened belonged to a recent period. First grave contained two child mummies bedded superficially in the sand."

C 2 "The second grave of which I got hold had been cut into the natural clay and covered with a solid roof."

E 1 "Grave E 1, in the depth, in the eastern side of the excavated shell mounds."

E 2 "Typical grave of the time after the contact with the Incas. The surface at the time of the construction of the grave was, according to the stratum lines—the best and only proof for it—only 0.15 m. (½ ft.) below the present one."

E 3 "Typical grave of the Chancay period: E 3. The roof of the grave was 1.3 meters below the present surface of the soil, which proves that the piling up of the mound went on after the making of this grave."

A 1 "Excavations at Ancon undertaken for the purpose of determining the origin of some apparently artificial mounds near the coast. A 1: Objects found in graves on top of the mound."

A 2 "Continuation of excavations on the same spot. Grave of a child."

A 3 "Grave of five mummies with roof of reed, and with two child mummies at the side of the principal grave."

A 4 "Another grave at the same spot."

Late Ancon I pottery, from (b) graves, "in natural soil not further covered by human agency"

B 1 "Excavations at the southeastern end of the ancient settlements, in square graves cut into the solid ground."

B 2 "Another grave."

B 3 "Another grave."

B 4 "Another grave."

P 1 "There are only four graves of the former group [western part of site P] "the contents of two [*sic*] of which can be given here (P 1–4). They are of later origin than the eastern ones (P 5 and higher numbers). They represent a time contemporaneous to the 3rd period of Pachacamac, and, in part, C of Trujillo." "Grave P 1, 5925, period C of Pachacamac." In regard to grave P 101, containing typical Late Ancon II pottery, Dr. Uhle says: "there was a small grave higher in the strata of refuse above P 1."

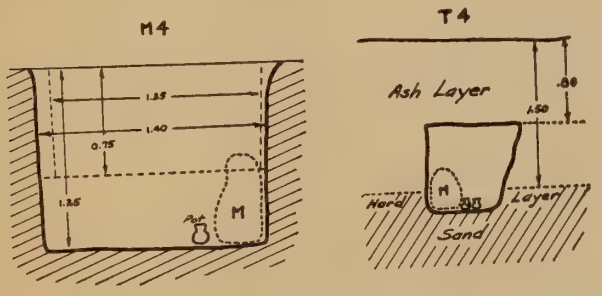

Fig. 9. Diagrams of two Middle Ancon II graves, M 4 and T 4. From Uhle, *op cit.*, p. 38, fig. 8, and p. 37, fig. 7.

Middle Ancon II pottery, from (c) graves, "partly in artificial, partly in natural soil, with artificial superimposed strata"

P 2, P 3 "There are only four graves of the former ones (western part of site D) . . . . They are of later origin than the eastern ones (P 5 and higher numbers). They represent a time contemporaneous to the 3rd period C of Pachacamac and, in part, G of Trujillo."

M "The character of the graves is the same at both localities: partly old (about period G of Trujillo), partly more recent (first signs of the type of Chancay). The theory proved by interments; by the existence of graves below recent kjoekkenmoedding stratification; by the different levels of older and more recent graves, partly under kjoekkenmoedding earth, partly higher in it; and by the continuation of the graves under the hills without any change in their original level, is that there was originally a large grave field in the plain, which was covered, in the period of the vessels of Chancay type, with kjoekkenmoedding strata."

M 3 "Another grave." No other data.

M 4 Only 1.25 m. deep. (Fig. 9.) One layer of deposit shown.

M 14 "Grave M 14, found under the eastern wall, proving the age of the enclosure of the ancient settlement." Figure 10 shows position.

M 15 "An additional grave at M." No number given this grave by Dr. Uhle.

M 102 "Grave from the plain."

T 1 "Excavations in the adjoining depression between the hills: T. Grave T 1 below the kjoekkenmoeddings; Epigone period." Diagram of site T, figure 8, shows the grave to be partly in soil under artificial layers, partly in lowest part of artificial layers.

T 3 "Small mummy of child, found deep near T 15, ... 5877, poncho (from same grave), Epigone period." Diagram of site T, figure 8, shows position in natural soil, with upper part of grave at a lower level of artificial layer.

T 5 "Grave T 5." Diagram of site T, figure 8, shows same position as graves T 1 and 3.

T 7 "Another grave, transitional to succeeding periods, character still similar to G of Trujillo." Diagram of site T, figure 8, shows same position stratigraphically as graves T 1, 3, and 5.

T 10 "Another grave, T 10." Diagram of site T, figure 8, shows same stratigraphic position as graves T 1, 3, 5, and 7.

T 11 "Another grave: determined as contemporaneous to period G of Trujillo by the type of 5707.

T 13 "Grave T 13: 5739, 5740. Both cups were found standing at the side of the grave, above its roof, below the superimposed kjoekkenmoedding strata near the original surface of the soil."

T 14 "Grave T 14. The grave had double or triple length, but the same width as others. It contained four mummies, three of which were sitting along one long wall, while the fourth was placed at the eastern end, a little separate . . . . Beginning of period G . . . . As elsewhere, the grave antedated the piling up of kjoekkenmoedding soil, which is about 6 feet thick above it."

T 15 No data or stratigraphy. Evidently composed of several burials, as T 15, T 15*a* 1, T 15*a* 2, T 15*b*, are distinguished. "Grave T 3, small mummy of a child, deep, near T 15."

T 101 "In the higher ground were found 5725–5727." (Higher than T 7.) Diagram of site T, figure 8, shows possible location of T 101 just above grave T 7, in lower layers of artificial deposit. Exact location however is uncertain.

Middle Ancon I pottery from (d) graves, "in natural soil beneath artificial strata"

Site P "Excavations on the elevation behind and near the so-called Pueblo Nuevo, the Indian settlement near the modern houses of Ancon . . . . This is a small plain about 100 m. long and about 6 m. above the sea. Shellmounds of different height surround it. The plain is a natural plateau, covered with about 3 to 5 feet of refuse of pre-Spanish settlements. Large grinding stones prove that the plain was occupied to Spanish time. But the graves are generally much older. They constitute for their largest part the oldest cemetery found by me at Ancon, and had been made before the heaping of the strata of refuse. There occur objects of the period of Tiahuanaco, of the Epigone period, and of others mostly contemporaneous to them. Besides, there are objects which reflect still another local period, anterior to the arrival of the old civilization of Tiahuanaco, and undoubtedly also antedating it in origin. Its objects—mostly pottery—are characterized by engraved ornaments of more or less depth. The preservation was as a rule bad. The graves were all found at great depths: mostly from three to over four meters below the present surface of the soil. Therefore only a few objects were found beside those of pottery."

P 5 This is the first grave to which the foregoing statement applies. "My own excavations were partly made to the west and northwest of former excavations, and partly to the east. There are only four graves of the former group . . . . (P 1–4). They are of later origin than the eastern ones (P 5 and higher numbers)."

P 6, P 7 Same circumstances as P 5.

P 8 "Grave P 8, 6335. Fragment of bowl, Tiahuanaco style. Found in soil of grave P 8." Same circumstances as P 5, 6, and 7.

P 10 "Grave P 10." Same circumstances as P 5–8.

P 12 Same.

P 13 Same.

P 14 Same.

P 15 Same. Diagram of grave, figure 11, p. 180, shows it to be 4 m. in depth, under layer of artificial deposit.

P 17 "P 17: the richest grave of all opened." "6033, influence of first Trujillo period; 6034, in the full style of Tiahuanaco; 6035, style of Tiahuanaco; 6036, bottle, painted in Epigone style."

P 18 "Grave P 18: 6098, black bottle with face . . . . contemporaneous to period G." Diagram of grave, figure 5, shows it to be 4.7 m. in depth, under a layer of artificial deposit.

P 19 "Grave P 19: 6109, painted bottle with two openings, Epigone style." Diagram of grave, figure 5, shows it to be 3.95 m. deep, under layer of artificial deposit.

P 20 "Grave P 20: 6141, Tiahuanaco style."

P 21 Diagram of grave, figure 5, shows it to be 4.2 m. in depth, under layer of artificial deposit.

P 24 Diagram, figure 5, shows grave to be 4.07 m. in depth, under layer of artificial deposit.

P 25 Same.

P 26 Diagram, figure 5, shows grave to be 3.86 m. in depth, under layer of artificial deposit.

P 28 "Grave P 28: 6215, influence of primordial style of Trujillo." Diagram figure 5, shows grave to be 4 m. in depth, under layer of artificial deposit.

There still remains site D, the hillslope southwest of the Necropolis. It is a site characterized by old kitchen débris, containing a few skeletons without definite burials or grave gifts. As only one pottery type was found at the site, further comment is unnecessary. The stylistic nature of Early Ancon ceramics, with supplementary evidence from other artifacts, determines the placing of the type at the bottom of the time scale.

Such is the evidence for the correlation of ceramic types with the types of burial at Ancon. While every burial is not in exact conformity in all details with its class, by far the greater number are. And in several cases we have a clear superimposition of pottery types of different cultural epochs to verify and support the purely objective stylistic classification. A more detailed discussion of each site will occupy the next section of this paper and attempt to demonstrate more clearly the relationships here indicated.

EXCAVATIONS MADE BY UHLE AT ANCON

The pottery collection under consideration came, as has been shown, from nine sites, A, B, C, D, E, H, M, P, and T. The placing of each of these on the map of Ancon has been discussed, while the correlation of the ceramic styles with the layers of deposit has necessarily involved some further discussion of the sites concerned. A more detailed treatment may, however, show the relationship between the pottery types and grave types more clearly, and offer, as well, some clue to their interpretation. It may be well to repeat here that all these sites were within the Necropolis proper, with the exception of site D. This site is outside of the old walls, to the southwest, and a unique pottery type, designated as Early Ancon, was found here.

SITE A

In regard to this site I will quote from Dr. Uhle's original notes:

> First excavations at Ancon: undertaken for the purpose of determining the origin of some apparently artificial mounds near the coast. The mound selected for the experiment is one of a range of hills nearest the northern enclosure of the ancient settlement, situated between an abandoned lime oven and the wall. Its distance from the shore is about 380 feet, elevation 21.5 feet. A cut was made into the mound from west to east. A natural elevation of about 15 feet above the plain, covered with yellow sand, served as base to the artificial layers. The thickness of the latter therefore amounts to only 6 feet at the top of the mound and on the upper part of its western slope.

All the pottery from site A was Late Ancon II in style, and the burials were all clearly in artificial strata.

SITE B

Site B is not described in any great detail in the original notes at hand, but sufficient is given to clearly establish the nature of the graves and their approximate location. Dr. Uhle's comments are brief:

> Excavations at the southeastern end of the ancient settlements, in square graves cut into solid ground.

This is in the vicinity of site H as it is shown in Dr. Uhle's published map 3 (pl. 40).[21] Diagrams of five H graves are also shown in

[21] *Op. cit.*

the same article, but the grave numbers do not agree with those at site B. There is a good possibility that sites H and B are synonymous, for their pottery type is the same, Late Ancon I, or, as it is called by Dr. Uhle, "black, white and red." In the article Dr. Uhle makes no mention of site B, but he describes four graves from site B in his original catalogues. This discrepancy cannot be settled here. The agreement, however, between these graves in solid ground and the Late Ancon I style of pottery is obvious.

SITE C

The two graves at this site are not particularly distinctive of any deposit.

> There were some graves near kilometer one of the railroad from Ancon to Lima. Those which were opened belonged to a recent period.
>
> The second grave of which I got hold had been cut into the natural clay and covered with a solid roof of clay.

The pottery type from both graves is late Ancon II, and while one grave (C2) at least represents an isolated burial away from artificial deposits, the nature of the grave gifts clearly shows its cultural affiliations.

SITE D

This site is the only place outside of the Necropolis proper at which Dr. Uhle conducted excavations. The sherds of pottery found here I have called Early Ancon, since stylistically they appear to me as forerunners of the Middle Ancon I ware, which is the oldest type in the Necropolis. This Early Ancon pottery was found in old shellmounds similar in general character to the later ones within the walls of Ancon. Dr. Uhle's description of the site is as follows:

> There are old kjoekkenmoeddings on the northern slope of the hill which adjoins the modern village of Ancon on its southeast. They were heretofore entirely unobserved, as their surface, with the exception of some fragments of shells strewn superficially over the ground, is entirely like that of the neighboring natural hills, and I became aware of them only after some time. Their extension from east to west is about 300 meters; their length on the slope from south to north, over 200 meters. Their upper end rises 60 meters above the adjoining plain and, while the refuse of kitchen and camp in the plain is hill-like, the surface of the deposits now being considered forms a slightly sloping plain, with only a few traces of scarcely perceptible unevenness.
>
> Excavations were commenced in the shape of ditches, a horizontal one about 40 meters long from east to west, and another following the slope at intervals for about 100 meters. The composition of the kjoekkenmoeddings was similar to those of the plain. Alternating strata of brown and black shades of ashes formed the main part of the deposit. The thickness of the refuse strata

was 3–4 meters, but in some places it may be greater. I had therefore found the site of an old settlement, of village-like extent, though house constructions were missing. Lower layers contained skeletons, laid on their sides, in squatting position, but as no objects of significance were found with them, I assume that the bodies buried in the interior of the midden represented only the poorer part of the population.

My observations on this spot would be of no special importance, were it not that the fragmentary objects (potsherds, clay figures, basket work, etc.) show a style heretofore entirely unobserved at Ancon or at other localities in Peru. Not one vessel is known to me, in any collection in the world, which visibly represents this style. This new style is also remarkable for its homogeneity. No other period at Ancon, from the time of the influence of Tiahuanaco to the time of the Incas, shows a similar homogeneity. This fact is quite as notable as the absence of objects of the style in question among the remains of other periods.

We have here, therefore, a quite separate civilization. When may this period have been? Was there room for it in the development at Ancon between the time of Tiahuanaco and the arrival of the Incas?

The character of this style is quite different from those subsequent to Tiahuanaco. Technically, an otherwise very uncommon blackish color prevails in polished vessels. The shapes of vessels (bowls, round pots, stiff-walled cups) are different from those generally seen in Peru. The ornamentation consists almost exclusively of engraving. Though engraved pottery is not rare in Peru, and belongs to various periods, this type seems to have something peculiar in its strength and cleanness of line. It is also peculiar because of the varied execution: lines, dots, parallel lines, crossed lines, fine dots, thick dashes sometimes ending abruptly, sometimes smoothly; all of which form a system and are combined in manifold ways. Some forms are entirely strange in Peru.

The ornamentation has more style than is common in Peruvian pottery. There is unusual inclination toward curved lines. Figurine heads look quite un-Peruvian. It would be easy to interpret them as Mexican. There are ornamental similarities with the oldest style of the region of Ica [Proto-Nazca], which I now place earlier than the period of Tiahuanaco. Those similarities exist in spite of one style using engraving, the other painting. Only cooking pots sometimes have nicely engraved ornaments in the southern style. But the inclination to curved lines, a greatness of stylistic conception in the use of such simple motives as frets or scrolls, repeat what may often be observed in the southern style. There is also identity in the shape of bowls or basins [pl. 48 *f*].

I consider it therefore undeniable that the people who left these kjoekkenmoeddings preceded the period of Tiahuanaco, and that they may have been more or less contemporaneous to the people of the oldest [Proto-Nazca] style of Ica. From Trujillo down to Ica we thus have the period of Tiahuanaco displaced as the oldest known in Peru, by finding, though still in local separation, three which antedate it: the oldest style of Trujillo, the oldest of Ancon, and the oldest of Ica. I consider these three styles to have been more or less contemporaneous and related to one another. Of the first and last named, this is certain, and the relation of that of Ancon is at least probable. These three styles may belong to the development of a great people bearing Peruvian civilization in their time, as later on the Aimaras bore it, till at last the Incas began a new period, in the development of whch they were disturbed by the Spaniards. It is curious, the longer one observes the pre-Tiahuanaco period,

the more frequent become the strange cultural or stylistic similarities to Central American civilization—a fact which justifies the hope that the sources of Peruvian civilization may yet be found not in Peru, but farther north.

In a later letter to Mrs. Hearst from Chancay (May 25, 1904), Dr. Uhle gives further details about this site which I present here, with slight changes of phraseology necessitated by Dr. Uhle's use of English as an acquired language.

I found [by excavation] that the shellmound had an extent of about 200 meters in every direction, and its depth may be estimated at from 3 to 5 meters. It rises on the hill about 60 meters above the mounds on the plain [Necropolis and vicinity], separated from them by the Ancon-Lima railroad. The two sites [slope and plain] differ in position, external appearance, and the cultural character of their contents. No traces of the civilization found in the shellmounds of the plain occur in the shellmound on the slope, although the composition of the two series of mounds is identical. . . .

It must be regretted that a cemetery representing the period of this shellmound has not yet been found. The mound contained some ordinary burials, but these cannot be the only ones left by a settlement so well developed in its arts. . . . The pottery in the graves of one of the oldest cemeteries near Ancon [in the Necropolis area] reminds one somewhat of the technique of the old inhabitants of the shellmound of the slope. But the engraved pottery there is different in color and ornament. Besides, it is found in association with pottery of various foreign styles (Tiahuanaco, Epigonal, and Early Trujillo), whereas the civilization of this shellmound is entirely homogeneous. Notwithstanding, it may be that some remembrance of the technique of the older people [of the mound on the slope] was preserved to the later times [of the oldest burials in the Necropolis].

The foregoing notes suffice to describe the nature of this interesting site. As to Dr. Uhle's comments on the pottery style here found, I am not in entire agreement, but shall present my reasons for considering the Early Ancon ware as a local forerunner of the Middle Ancon I ware, more thoroughly in the conclusion of this paper.

SITE E

The graves, three in number, found here are uniformly Late Ancon II in their pottery. This site cannot be put on the map as no location data for it are given by Dr. Uhle. Of these graves he says:

Excavation of the eastern slope of the mound of kjoekkenmoedding, excavated to the base, height determined as 9.3 m. (31 feet) above the base. Of course all graves were of earlier [*sic*] date than the original and deeper layers. These latter proved to be partly of the age of the Chancay period of Ancon, partly of a more recent age in which contact with the Inca civilization had already taken place.

The foregoing passage is somewhat obscure. Perhaps the word "earlier" should be "later," and in the next sentence "latter" applies to the word "graves." Be this as it may, all the graves are in the refuse, and are Late Ancon II in the style of their pottery. The notes on the three graves are as follows:

> Grave E 1, deep in the eastern side of the excavated shellmound.
>
> Grave E 2, typical grave of the time after contact with the Incas. The surface at the time of the construction of the grave was .... according to the stratum lines .... only 0.15 m. (½ foot) below the present one.
>
> E 3, typical grave of the Chancay period. The roof of the grave was 1.3 m. below the present surface of the soil, which proves that the piling up of the mound went on after the making of this grave.

SITE H

The one grave at site H (H 2) has only a small amount of pottery, but the pottery clearly shows its affinity to the Late Ancon II style. The probabilities are that it was in artificial strata.

Grave H 2, containing four mummies and a skull, was only six feet deep. The grave had belonged to a family which by continued interments disarranged the contained objects.

In regard to site H, as before mentioned, we come to a discrepancy between Dr. Uhle's published report and his original notebooks. In his published report,[22] he refers to a series of graves at H, of which the original notes make no mention. His figure 6 shows five graves, H 1, H 4, H 5, H 6, and H 9. From the sketch, H 1 appears to have two pieces of pottery, H 6 one, and H 9 three. According to the text the pottery is of the "black, white and red" type ("period C of Pachacamac"), which I have called Late Ancon I. Dr. Uhle says:

> These graves observed at H lie in the uncovered gravel of the plain. They are almost exactly cubical, roofed with reeds or straw, and in part the smoothened inner sides are also lined with these materials. Besides this it seems that the bodies were placed in a muddy mass that later hardened like plaster .... a circumstance difficult to understand.

I have already mentioned in connection with site B its possible identity with H. It is clear, in any case, that whether there were two cemeteries or one in this general locality, each contained Late Ancon I ware, in square graves, cut into the natural gravel of the plain.

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[22] P. 36, and fig. 6.

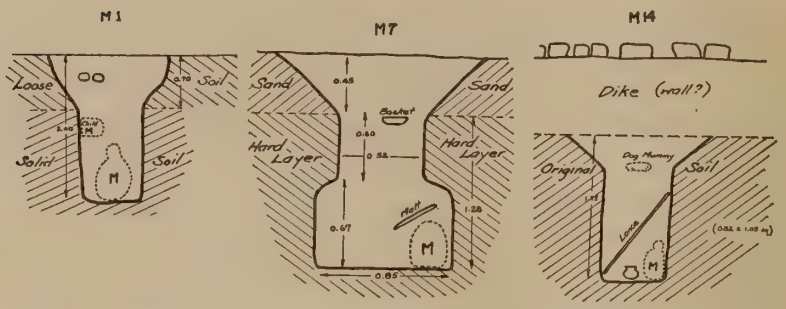


Fig. 10. Diagrams of three Middle Ancon II graves, M 1, M 7, and M 14. From Uhle, *op. cit.*, p. 37, fig. 6, and p. 38, fig. 8.

SITE M

From Dr. Uhle's original description in his notes and from his diagrams it appears that at this site we have graves in two types of strata: some in natural soil under the artificial layers, and some in both natural soil and the lower levels of the superimposed strata. The following are his original notes on site M:

> Excavations near the eastern end of the old settlements. This part was bounded on the east by a wall now ruined. A wide gravefield separated this wall from hillocks 5–6 m. high, and other graves were found to the west of these hillocks. . . . . The character of the graves is the same at both localities, partly old (about period G of Trujillo), partly more recent (first signs of vessels of the Chancay type). The interpretation proved by interments; by the existence of graves below recent kjoekkenmoedding stratification; by the varying levels of older and more recent graves, partly under the kjoekkenmoedding earth and partly in it; and by the continuation of the graves under the hills without any change in their original level . . . . is, that there was originally in the plain a large gravefield which, in the period of the vessels of Chancay type, had been covered with kjoekkenmoedding deposits. The mounds are due to the formation of these latter and do not pertain to the original character of the locality, so that the present configuration of the ground is absolutely different from that which it presented before the period of the Chancay type of pottery.
>
> This is an observation to be made everywhere at Ancon, that the hill formation of the Necropolis of Ancon, however extensive and voluminous, is of recent origin. It proves to be the work of the people of a single period, which must have been of considerable length, and thus adds further to the duration of the aggregation of ancient Peruvian periods.

The assignment of graves containing Middle Ancon II and I pottery to these two stratigraphic levels was shown in detail in the foregoing section. In summary, graves M 3, 4, 14, 15, and 102 contain Middle Ancon II pottery, and are partly in the artificial and partly in the natural soil layers; graves M 7, M 12, and M 103, contain Middle

Ancon I pottery, and are in natural soil under the artificial layers. The fact that the depth of M 12, 1.15 meters, is less than that of M 14, 1.75 meters (see figs. 11 and 10) can only be explained by the assumption that M 12 was made prior to the later but deeper burial M 14. The fact that the two Middle Ancon culture periods were undoubtedly continuous, and that the pottery types show such close relationship, makes the fact of their appearance in the same cemetery and at practically the same depth perfectly possible.

SITE P

This site includes a large number of graves, representing all four periods distinguished within the Necropolis. According to Dr. Uhle's original notes the nature of the site was as follows:

> Excavations on the elevation back of Pueblo Nuevo, the Indian settlement near modern Ancon. It is a small plain about 100 meters long and 6 above the sea. Shellmounds of different height surround it. The plain is formed of a natural plateau which was covered with refuse about 3–5 feet thick; large grinding stones lying around prove that the site was occupied to Spanish times. But the graves are generally much older. They constitute in the main the oldest cemetery found by me at Ancon [within the Necropolis] and had been made before the strata of refuse accumulated. There occur objects of the period of Tiahuanaco; of the Epigonal period; and of other periods mostly contemporaneous to these; besides which there were objects reflecting a local period anterior to the arrival of the old civilization of Tiahuanaco, and evidently earlier than this in origin also. The distinctive character of the pottery of this early local period is ornamentation by fairly deep engraving. The preservation of the remains was as a rule bad. The graves were all found at considerable depths . . . . mostly from three to over four meters below the present surface . . . . so that only few objects besides pottery remained.
>
> In part the older graves at this site had been excavated previously. Part of my excavations were made to the west and northwest of these former ones. The graves found here are later than the easterly ones (P 5 and up), representing a time contemporary to the 3rd period (C) of Pachacamac and, partly, to period (G) of Trujillo.

The first four graves, P 1–4, are those in the west, and as Dr. Uhle says, prove to be later than graves P 5–28. Grave P 1 contains Late Ancon I pottery. Grave P 101, according to Dr. Uhle's original notes, "was a small grave higher in the strata of refuse, above P 1." Now this grave P 101 contains Late Ancon II pottery, so that the Late Ancon I pottery, which in all other cases was found in isolated burial grounds without artificial strata, occurs in P 1 actually beneath Late Ancon II graves and in artificial strata, and the style is thereby fixed stratigraphically.

Graves P 2 and 3 contain Middle Ancon II ware, and are evidently in the basal layers of the artificial deposit. These evidently are the type representing "period G of Trujillo," while the P 1 grave represents "period C of Pachacamac"' as the Late Ancon graves do at site B.

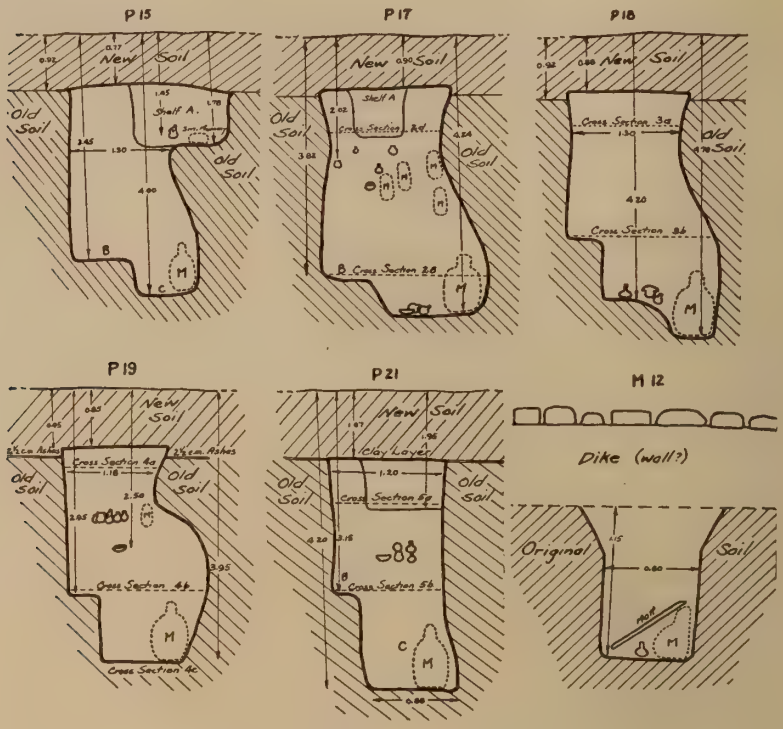


Fig. 11. Diagrams of six Middle Ancon I graves, P 15, 17, 18, 19, 21, and M 12. From Uhle, *op. cit.*, p. 37, fig. 5, and p. 38, fig. 8.

The sketches of graves P 15, 17, 18, 19, and 21 (fig. 11) show clearly the deep type of grave under the artificial deposit which Dr. Uhle speaks of as characteristic of the oldest graves, P 5 to P 28.

At site P, then, we have the four types of pottery represented, with only three of the four types of burial, the Late Ancon I grave, P 1, being of the same type as the characteristic Late Ancon II burials. This not only shows the close relationship between the two Late Ancon periods but by the occurrence of the Late Ancon II grave, P 101, directly above grave P 1, the relative age of the two types is strongly intimated. If all the Late Ancon I graves had been isolated in the one cemetery, we should have had only stylistic evidence to indicate their temporal position in the Ancon series.

SITE T

Dr. Uhle makes no general statement in regard to site T, but its location on the map (pl. 41) and the diagram of the graves (fig. 8) give ample data in regard to it. Here we have a clear case of superimposition of graves containing two distinct pottery styles. Graves T 1, 3, 5, 6, 7, 10, 11, 13, 14, 15, and 101 are partly in the original underlying soil, and contain Middle Ancon II pottery, as set forth in the second section of this paper.

In regard to grave T 2, Dr. Uhle in his original catalogue says: "Grave of a child." The only grave of a child shown in his diagram (fig. 8, T 2?) is unnumbered, midway between graves T 9 and T 12, in the upper strata. The two artifacts shown to the right of this grave (fig. 8, T 2?) are similar to a small jug and modeled clay animal listed in his catalogue under grave T 2. I have therefore indicated this unnumbered grave (T 2) with a question mark. The grave T 2 at the extreme right of the diagram shows no grave gifts, and is marked: "Mummy in broken pot." While this interchange of the two grave designations seems justified from the evidence in the diagram and original notes, it is really of little significance as it does not affect in either case the vertical placing of T 2.

A general explanation may be in order. The great shell heaps or deposits of kitchen débris, so characteristic of the Necropolis at Ancon, are characterized, especially in their upper layers, by the presence of Late Ancon II pottery. This type is called by Dr. Uhle "black and white" or "Chancay" ware. There are, moreover, indications that lower in these artificial heaps are graves containing the Late Ancon I style of pottery, but so far as the present collection is concerned, most graves containing this latter type of ware are found in isolated cemeteries not covered by artificial deposits. Grave P 1 alone shows the stratigraphic position of the Late Ancon I style. This type of pottery Dr. Uhle connects with "Period C at Pachacamac," and calls it "black, white and red." At the base of the artificial mounds, partly in their lower layers and partly in the underlying soil, is a series of graves containing Middle Ancon II pottery. Below these, entirely in the original soil, are deep graves containing the Middle Ancon I type of pottery. The former of these styles Dr. Uhle designates as "Epigonal," and the latter "Tiahuanaco" associated with an early local style. The distinction that he makes between these two is not

always clear in his notes (see grave P 17, p. 171), but in his published account[23] it is well established.

Dr. Uhle found no deeper burials than these within the Necropolis, but he indicates in his notes that further excavations might reveal their presence. On the hillslope to the southwest, however, at site D, he found old shell heaps similar to those within the Necropolis proper but containing a unique type of pottery. This ware he affiliates with the "Proto-Nazca" of the south, but I have designated it "Early Ancon." All indications point to the antiquity of this ware, and it appears to me as a forerunner of the Middle Ancon I style of pottery from within the Necropolis. Such, in brief, is the summary of the stratigraphic and distributional relationship of ceramic types which Dr. Uhle discovered at Ancon.

[23] *Op. cit.*

CONCLUSION

The earliest pottery Dr. Uhle found at Ancon was the early shell heap ware, which I have called Early Ancon. This appears characteristically as a one-color ware, often unslipped, and decorated with deep incisions forming rectilinear and curvilinear patterns. Dr. Uhle believes these incised designs to be similar in style to the designs of the Proto-Nazca ware of the south. Scrolls, curves, and frets which appear in such designs (fig. 7) seem to him to indicate the close relationship of the two types. The shapes, as represented by the one complete bowl (pl. 48 *f*), and as indicated by the sherds, he also finds analogous to those of Proto-Nazca vessels. In figures 6 and 7, I have presented typical incised patterns from Middle Ancon I pottery and from Early Ancon sherds. While the designs on the former are largely confined to the necks of the one-colored polished jars, I believe that they show relationship to the Early Ancon incisions, as Dr. Uhle himself suggests (p. 176). The shapes also seem to be similar, as the one complete bowl (pl. 48 *f*) finds exact analogues in the Middle Ancon I series (pl. 47 *f*); and in each case the ware is thick and red, whereas the Proto-Nazca ware is characteristically thin and polychrome. On the whole I am inclined to see a clearer relationship between the Early Ancon ware and Middle Ancon I ware than is indicated between the former and the southern Proto-Nazca. The Early Ancon ware is distinct as a type, it is true, but its nearest relationship appears to me to be with the later styles at Ancon. Theoretically this Early Ancon ware may possibly represent an early widespread Peruvian type from which the Proto-Nazca might have arisen. The fact that the Supe shell heaps excavated by Dr. Uhle yield a similar type of ware is suggestive; but in the absence of any positive record of the type in the south,[24] this suggestion must remain hypothetical. Later in the Middle Ancon I period some similarities in design (pl. 46 *n*, fig. 4) and shape (pl. 46 *i*), as well as the use of four or five colors, give a definite suggestion of the true Proto-Nazca. More intensive work in the old shell-mounds at Ancon, and further work in the southern valleys, alone can satisfactorily solve this problem of origins.

The earliest ware which Dr. Uhle found in the Necropolis proper, in deep graves underneath the strata of artificial deposit, is the just

[24] In Chincha valley, at site D, Dr. Uhle found sherds of early incised ware somewhat similar to the Early Ancon type. At the same site was found one sherd definitely suggesting the Proto-Nazca style. This volume, p. 52, pl. 20.

mentioned Middle Ancon I ware. The graves characterized by this style contain two types of pottery. The first, a one-color incised ware, resembles, as I have pointed out, the Early Ancon style. The other type consists of polychrome foreign styles. The strongest of these is the Tiahuanaco style in its complete form, with some indications of its degraded or Epigonal type (pl. 47 *d*). There are also indications of the finely modeled Proto-Chimu ware (pl. 46 *a, j, l*) from Trujillo, as well as some slight indication of the colorful southern types (pl. 46 *c, n*). These styles are not isolated in separate burials but are found intermixed with the one-color incised local type in every case. I do not therefore see any evidence for a definite "Tiahuanaco" period, but rather for a time at Ancon characterized by this one-color incised ware, when foreign influences from all along the coast left their impress on the Ancon culture. The mixed pottery types, all more or less contemporaneous in the individual graves, represent the absorption into the local style of these various foreign influences. With no definite knowledge of the length of this period we cannot absolutely place the styles in time, but the occurrence of traces of three such well-known types as the Proto-Chimu, Proto-Nazca, and Tiahuanaco simultaneously at Ancon seems important.

The graves partly in the artificial layers of the Necropolis, and those partly in the original soil, are characterized by the Middle Ancon II ware. This is likewise of two types: a crude red ware with wavy white and black lines, and a brown or red ware decorated with the square, massive "Epigonal" or degraded Tiahuanaco designs. These two types are also found in the same graves. The former type appears to me as the local successor of the Middle Ancon I red incised ware, for it is found, so far as Dr. Uhle's collections go, only in the valley of Chancay and at Ancon. The second division, or Epigonal type, is widespread and is characteristic at Pachacamac and almost the entire northern coast. The modeling and relief characteristic of later Trujillo periods are also found in the pots from these graves. This period is closely interlinked with its predecessor, Middle Ancon I, both in stratigraphy and in style. It rather appears as a decadent successor to the former both in technique and decoration: the polished and incised ware deteriorated in technique but added painting with wavy black and white lines, while the contemporaneous polychrome "Tiahuanaco" style degraded into the "Epigonal" type. From the number of graves and range of pottery types, this Middle Ancon II period would seem to have been of considerable duration. The occur-

rence of two such distinctive types of pottery in the same graves, a condition occurring also in the Middle Ancon I period, is hard to explain except as the result of a close amalgamation of at least two distinct cultures into the population of Ancon at this time.

The pottery of this period is succeeded by the Late Ancon I ware, called by Dr. Uhle the "black, red and white" ware, and is but sparingly represented in the University collection. The exact stratigraphic position of the type is not strongly indicated by the data on hand, but the one grave (P 1) below Late Ancon II graves and above Middle Ancon II graves, would seem to show its relative position. The other graves containing Late Ancon I ware, the contents of which are represented in the University collection, were in isolated gravefields in gravel, uncovered by later deposits. In regard to the Late Ancon I period the data on the two missing sites are of importance. Of these Dr. Uhle says:[25] "Following the culture of Tiahuanaco there would seem to have been on the one hand Epigone graves, in which the style is beginning to change to the period of the black, white and red ornaments, at H in the southeast of the Necropolis, and then the graves of the black, white, red period itself, at Z in the western part of the plateau P; on the other hand, a series of gravefields with different contents at T and M in the northeast of the Necropolis." He goes on to show that the graves at Z were in gravel covered by artificial strata, but were higher and later than the original graves in the gravel at site P. Later, over these "black, white and red" or Late Ancon I graves were formed the shell heaps characterized by the black and white pottery (Late Ancon II). It is extremely unfortunate that the pottery and data on these two sites are not available,[26] for from the foregoing it would appear that H was transitional between Middle Ancon II and Late Ancon I, while site Z represented the pure Late Ancon I style. Stylistically the Late Ancon I ware is intermediate between the earlier Middle Ancon II style and that of Late Ancon II, the use of red and black connecting it with the former, the prevalence of a white slip with the latter. It is too poorly represented in the collection under consideration, however, for any more extensive idea of its cultural significance to be given here.

Following the "black, red, white" pottery in time we have the Late Ancon II period. The graves of this period are characterized by

[25] *Op. cit.*, p. 36.

[26] It has already been pointed out that sites H and B may be the same. Dr. Uhle in his original catalogues speaks of pottery from B graves as transitional between the Epigonal and the three-color ware of Pachacamac.

"black and white" pottery, and are all found in the large shell heaps of the plain within the Necropolis. The ware seems to be homogeneous and of a style rather closely confined to the valleys of Ancon and Chancay. The great depth and abundance of the deposits of which this ware is characteristic, indicate that this one period was of long duration. Foreign influences do not seem to have had much effect during all this time, and it is only in the upper layers that the ware of the Incas is found. No typical Inca pottery is represented in the present collection, but Dr. Uhle records several Inca graves in the highest levels of the shell heaps. This whole last period would seem to have been one of isolation, in which the people of Ancon and Chancay settled down to manufacturing the typical black and white pottery undisturbed by contact with other cultures. From such evidence as we have at hand it does not appear probable that even the Incas effected any great change. The isolated position of Ancon, surrounded by mountains and deserts, made this state of affairs quite possible and also makes the strong foreign influences of the early Middle Ancon I period all the more remarkable.

These simple and poorly ornamented pottery types, which we find at Ancon from the earliest to the latest periods, apparently represent the gradual development of the local culture. On this continuous record the waves of foreign culture or migrations each left a mark to show the time at which it reached this isolated valley midway between the high cultures of the north and south. The dating of the periods is very difficult and must be based on a comparative study of the entire coast. The approximate date of 100 B.C. which Dr. Uhle gives the Early Ancon culture ("Pescadores mas antiguos de Ancón),[27] seems very reasonable, though if this culture be regarded as a forerunner of the southern Proto-Nazca, which I consider quite possible, its date might be earlier still.

In conclusion, then, it appears that while much intensive work remains to be done, the main outline of the cultural development of Ancon is well indicated by Dr. Uhle. A careful examination of all the data on hand verifies in the main his conclusions as to the stylistic sequence and stratigraphic relationship of periods within the Necropolis and in the ancient shellmounds. The exact relationship between this ancient shellmound culture and the oldest period within the Necropolis, like the exact nature of the Late Ancon I period, remains to be determined.

[27] Los Principios de las Antiguas Civilizaciones Peruanas, Bull. Nat. Acad. History of Ecuador, IV, no. 12, p. 11, 1920.

APPENDIX

CLASSIFICATION OF THE CERAMICS ILLUSTRATED BY REISS AND STÜBEL

In conjunction with the classification of the present Uhle collection from Ancon, I have also attempted to classify the ceramic pieces illustrated by W. Reiss and A. Stübel in their monumental though general work on "The Necropolis of Ancon" (Berlin, 1880–1887). I have done this for two reasons: first, to aid the reader of the present paper in a clearer visualization of the types of pottery Dr. Uhle distinguishes at Ancon by the use of these realistically colored lithographs; and secondly, to attempt to bring some order out of the chaos there presented when vessels of so many types and periods are depicted without any attempt at classification. I realize that a classification from illustrations of pottery is a risky thing, even when the illustrations are as exact and as well done as those presented by Reiss and Stübel. Nevertheless, such an attempt seems justified even if it does no more than to further illustrate the typological distinctions made in this paper, and it may perhaps be of assistance in a later classification based on a more intensive study of the stratigraphy and ceramics of Ancon. The pottery type nomenclature used in the classification is the same as that used in the rest of the present paper, with the addition of the nomenclature of the Inca style which is not at all strongly represented in the Uhle collection heretofore considered. Only objects of pottery are considered in this classification.

Each plate containing pottery objects from Ancon is listed below, and opposite the figure number is the period to which I assign the piece. The designations are: Inca, Late Ancon II (L. A. II), Late Ancon I (L. A. I), Middle Ancon II (M. A. II), Middle Ancon I (M. A. I), and Early Ancon. Where the classification of the piece seems clear there is no qualifying mark, but where the exact correlation of the piece illustrated as of a specific style is not entirely certain, I have questioned it. Later intensive stratigraphic work at Ancon should remove the doubt in these cases by a more detailed classification. But with only the main periods at Ancon clearly distinguished, I am not at this time in a position to be certain of the typological provenience of all the pieces illustrated.

PLATE 91

Fig.: 1. L. A. II
2. L. A. II
3. L. A. II and M.A. II transitional
4. L. A. II (?)
5. M. A. II
6. L. A. II (?))
7, 8. L. A. II and M. A. II transitional (?)
9. M. A. I
10. L. A. II or Inca
11. (?)
12. M. A. II
13. (?)
14. L. A. II or Inca

PLATE 92

Fig.: 1. L. A. II or Inca
2, 3. Inca
4. (?)
5. L. A. II
6. L. A. II or Inca
7. L. A. II
8. L. A. II or Inca
9. M. A. II
10. (?)
11. M. A. I or II
12. M. A. I

PLATE 94

Fig.: 1. L. A. I (?)
2. L. A. II
3. M. A. I (?)
4–10. L. A. II

PLATE 95

Fig.: 1–4. L. A. II
5. (?)
6. M. A. II
7. (?)
8. L. A. II
9. L. A. I or II
10, 11, 12(?), 13(?), 14, 15. L. A. II
16. L. A. I(?)
17–19. L. A. II
20. L. A. I (?)
21. L. A. II

PLATE 96

Fig.: 1. M. A. II
2. (?)
3. M. A. II
4. M. A. I[28]
5. Inca
6. M. A. I[28]
7. M. A. II
8, 9. M. A. I
10. L. A. II (?)
11. Inca
12. M. A. II
13. Inca
14. M. A. I
15. M. A. II (?)
16. M. A. I or II
17–18. M. A. I
19. M. A. I (strongly suggests Early Ancon)

PLATE 97

Fig.: 1. M. A. I or II
2. M. A. II
3. M. A. II (?)
4. M. A. I or II
5. M. A. II
6. M. A. II (?)
7, 8. (?)
9. Inca
10–12. M. A. II

PLATE 98

Fig.: 1. M. A. II
2. L. A. II
3, 4. M. A. I
5. M. A. I or II
6, 7. M. A. II
8. M. A. I (?)
9. M. A. I or II
10. M. A. II
11. (?)

[28] In regard to these pieces it should be remembered that in the Uhle collection there are no Late Ancon I or Inca specimens of this type.

PLATE 99

Fig.: 1. M. A. I
2. L. A. II
3–6. M. A. II
7. (?)
8. L. A. II
9. (?)
10. M. A. II
11–19. Too fragmentary for exact classification.

PLATE 100

Fig.: 1. M. A. II
2, 3. M. A. II (?)
4–8. (?))
9, 10. L. A. II
11, 12. L. A. II (?)

To sum up the results of this classification, it appears that out of the 128 pieces of pottery illustrated by Reiss and Stübel, 5 are duplicates, 23 are not typical enough to allow classification, and 2 may be considered as transitional. The remainder of the pieces fall into the following classification:[29] Pure Inca, 6; Late Ancon II, 38; Late Ancon I, 5; Middle Ancon II, 26; Middle Ancon I, 23; and Early Ancon, only suggested by one Middle Ancon I sherd. This shows that within the Necropolis proper at Ancon the Late Ancon II, Middle Ancon II, and Middle Ancon I graves are most common, while Late Ancon I graves are rare, as Dr. Uhle found them to be. Aside from the one sherd (pl. 96, fig. 19), Reiss and Stübel show no occurrences of Early Ancon ware within the Necropolis, and this sherd probably represents the influence of Early Ancon or Middle Ancon I and not true Early Ancon. While the five Late Ancon I pieces suggest that style definitely, they are not all of the undisputed "black, white and red ware" which Dr. Uhle found in the isolated cemetery B within the Necropolis. From these vessels, it would appear that most of the excavations carried on by Reiss and Stübel were made in and beneath the main shell heaps in the Necropolis, and not on the bare plain between the mounds where Dr. Uhle found the Late Ancon I style cemeteries.

[29] Question marks have been ignored in this summary. Where a piece was designated as "L. A. II or Inca" (as pl. 91, fig. 10), I have counted it in this summary as the first or L. A. II on the basis that its strongest affiliations are with that type.

GRAVE PROVENIENCE AND SPECIMEN NUMBERS OF VESSELS SHOWN IN PLATES

Plate 42. Late Ancon II: *a*, A 4–5588; *b*, A 3–5584; *c*, A 4–5588; *d*, E 3–5795; *e*, H 2–5824; *f*, E 3–5795; *h*, E 3–5792; *i*, E 3–5793; *j*, E 3–5792; *k*, T 12–5787; *l*, T 16–5781; *m*, T 12–5787.

Plate 43. Late Ancon II: *a*, E 3–5796b; *b*, A 3–5581; *c*, A 1–5546; *d*, E 1–5856; *e*, A 4–5589; *f*, T 9–5579; *g*, T 2–5772; *h*, E 3–5796a.

Late Ancon I: *i*, B 1–5594; *j*, P 1–5926; *k*, P 1–5925; *l*, B 1–5593; *m*, B 3–5598; *n*, B 2–5595; *o*, B 4–5600; *p*, P 1–5908.

Plate 44. Middle Ancon II: *a*, T 1–5646; *b*, T 5–5728; *c*, T 14–5662; *d*, T 14–5660; *e*, T 7–5712; *f*, M 14–5609; *g*, M 4–5630; *h*, T 14–5662; *i*, T 7–5715; *j*, M 4–5632; *k*, M 4–5633; *l*, T 1–5648; *m*, T 14–5661; *n*, T 1–5649; *o*, T 14–5750; *p*, T 5–5729; *q*, T 1–5650; *r*, P 2–5919.

Plate 45. Middle Ancon II: *a*, P 2–5915; *b*, P 2–5917; *c*, T 14–5672d; *d*, T 15–5776; *e*, T 6–5654; *f*, T 10–5698b; *h*, T 15–5756; *i*, T 4–5661; *j*, T 7–5718a; *k*, T 10–5698a; *l*, T 1–5647; *m*, T 1–5652c; *n*, T 4–5666; *o*, T 11–5704.

Plate 46. Middle Ancon I: *a*, P 17–6033; *b*, P 25–6178; *c*, P 20–6141; *d*, P 6–5954; *e*, P 6–5956; *f*, P 17–6035; *g*, P 8–6335; *h*, P 17–6036; *i*, P 17–6037; *j*, P 20–6142; *k*, P 7–5965; *l*, P 5–5937; *m*, P 15–6030; *n*, P 14–6018; *o*, P 13–6011; *p*, P 5–5939; *q*, P 28–6216.

Plate 47. Middle Ancon I: *a*, P 24–616; *b*, P 25–6160; *c*, P 26–6200; *d*, P 19–6109; *e*, P 17–6041; *f*, P 24–6168c; *g*, P 28–6215; *h*, P 21–6149; *i*, P 19–6117; *j*, P 14–6020; *k*, P 24–6165; *l*, P 26–6209; *m*, P 14–6019; *n*, P 18–6099; *o*, P 24–6163.

Plate 48. Early Ancon: *a*, D 6354, 6354, 6345, 6349, 6349, 6344, 6344, 6344, 6344, 6351, 6347, 6350, 6347, 6348, 6347, 6344, 6344, 6346, 6344, 6344, 6351, 6348, 6351, 6344, 6344; *b*, D 6356a; *c*, D 6355; *d*, D 6355; *e*, D 6342; *f*, D 6358; *g*, D 6342; *h*, D 6352; *i*, D 6352.

Plate 49. Late Ancon II: *a*, T 6327; *b*, A 1–5547; *c*, T 2–5774.

Middle Ancon II: *d* (above), T 14a–5689; *e*, T 7–5716; *f*, T 11–5709; *g*, T 11–5707.

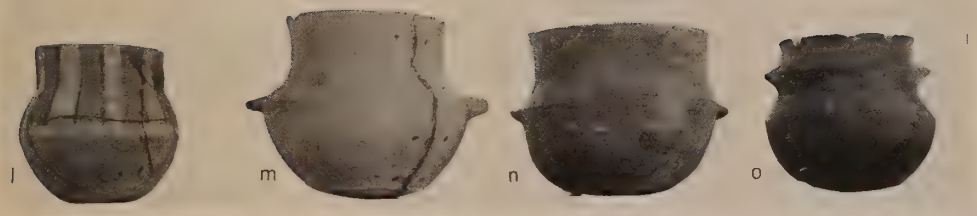
Middle Ancon I: *h*, P 5–5942; *i*, P 6–5963; *j*, P 25–6184.

THE SHELLMOUNDS
of ANCON.
Scale 1:10000.
Abbreviations:
sh = shellmound
= graves
Numerals = altitudes in metres
N.
Enclosure
Exhaust Cone
Enclosure
Line of Railroad
Modern Village of Ancon
Oldest Shell mound
Hill Fort ress
A
B?
C
D
M
T
P
H

LATE ANCON II

LATE ANCON II
LATE ANCON I

MIDDLE ANCON II



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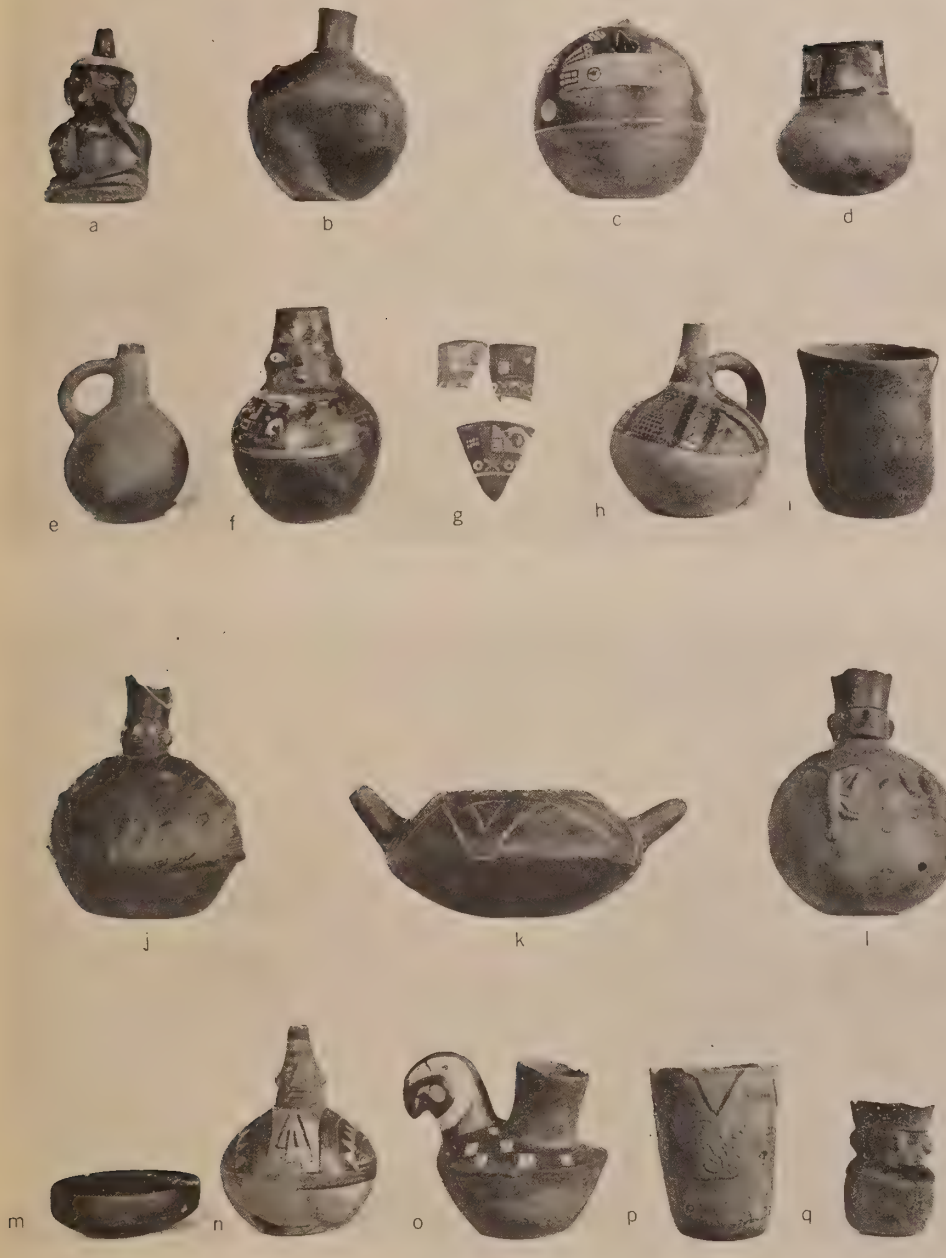

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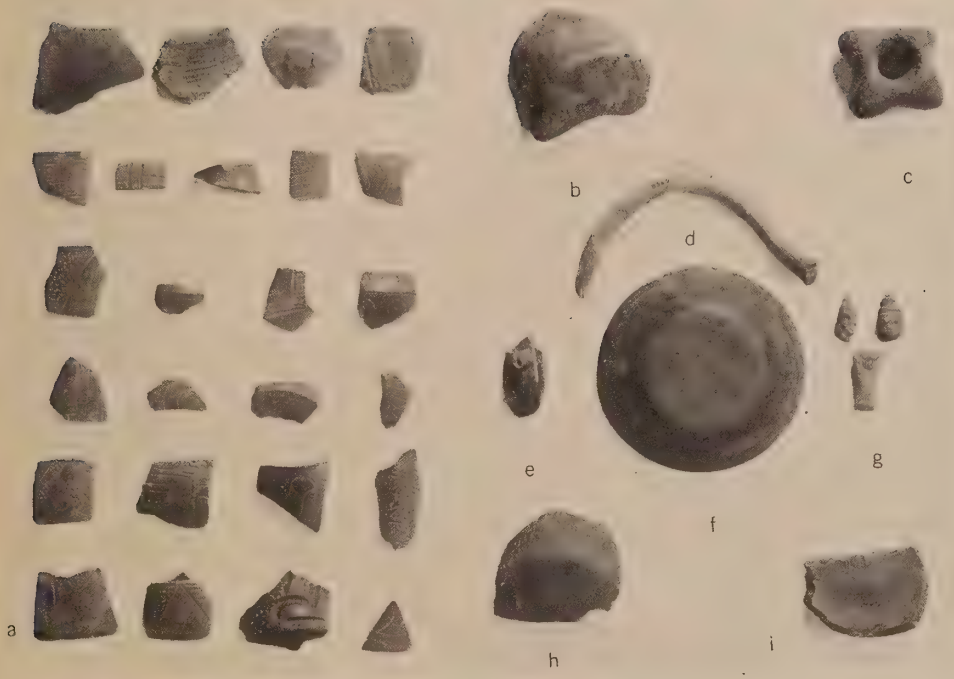
MIDDLE ANCON I



EARLY ANCON

LATE ANCON II
MIDDLE ANCON II
MIDDLE ANCON I

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3 3125 01558 3525

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